



International Health Research Forum

Making the case for Health Research & Institutional capacity building in Tunisia

Faculty of Medicine Ibn El Jazzar, Sousse

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Communications for project ideas & research activities

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ORAL COMMUNICATION n°1:

Title: School-based Mobile Asthma Education Program to improve health outcomes in children with asthma: A project proposal

Authors: Maha Dardouri (PhDc)¹, Jihene Sahli (MD)¹, Lilia Chniti (PhD)², Thouraya Ajmi (MD, Pr)¹, Jihene Bouguila (MD, Pr)³ ' Manel Mallouli (MD, APr)¹

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ABSTRACT:

Mobile Health and Therapeutic Education Programs (TEP) are increasingly recognized as essential components of pediatric asthma management to improve disease outcomes. Uncontrolled asthma in school-aged children can be explained by the lack of self-care priority. The aim of this protocol study is to implement an education program (My Mobile Asthma Education Program (MyMAEP)) in order to improve asthma outcomes among school-aged children with asthma. Therefore, a randomized controlled trial will take place in the primary schools of the city of Sousse, Tunisia. Children aged 6 to 11 years with mild to severe asthma enrolled in these schools will be randomly assigned to either intervention or control group. Children with their parents in the intervention group will receive MyMAEP (smartphone application + TEP), while the control group will receive only TEP. "INHALE/استنشاق" is an innovative smartphone application in Tunisian dialect for iOS and Android systems. The application will provide self-education of asthma with a portable spirometer connected to a Bluetooth-enabled smartphone. The MyMAEP team is multidisciplinary including scientists, a pediatric pulmonologist, a pediatric psychologist and experts in the field of Information and Communication Technologies. The primary outcomes of this trial are quality of life of children and their parents, asthma symptoms control and pulmonary function. The secondary outcome is the number of asthma-related acute health care use (Emergency department visit and hospitalization). The significant contribution of this program is the reduction of burden of asthma on health care system and on families of children with asthma. Self-care education can empower the target population and develop individual abilities in children with asthma.

ORAL COMMUNICATION n°2

Title: Genetic and epigenetic studies in infertile men

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ABSTRACT:

The World Health Organization has described infertility as a health problem of global concern. Infertility is defined as inability to conceive in period of 12 months of normal intercourse. Infertility affects about 15%-20% of couples around the world and in about 50% of cases with the contributions of a male factor, which is often associated with defective spermatogenesis, leading to abnormal sperm count, motility or morphology. Male infertility is a multifactorial phenotype but the genetic factors are now known to be implicated in a large (10-15%) proportion of infertility cases including chromosomal abnormalities and single-gene mutations. Recent evidence has suggested that epigenetic abnormalities, such as DNA methylation, may contribute to male infertility. However, 40%-50% of infertile males does not receive a clear diagnosis and thus they are reported as unexplained.

Genetic and epigenetic abnormalities are transmissible by Assisted Reproductive Technologies (ART). Hence, the interest of our study that consists to investigate the genetic and epigenetic factors of male infertility in our patients in order to provide couples with adequate genetic advice and to prevent the risk of transmitting gene mutations or epigenetic abnormalities.

We will conduct a prospective study on infertile patients who consult the laboratory of Cytogenetics, Human Reproductive Biology and Molecular Biology. Our cohort is selected exhaustively based on the sperm profile that has been validated on two spermograms at three months apart.

In genetic study, we evaluate the chromosome abnormalities by constitutional karyotype analysis and we search for causal mutations of male infertility by Sanger's sequencing. This technique, with low resolution, limits the identification of new genes involved in infertile men. Next Generation Sequencing (NGS) seems to be the best-adopted strategy to find causal mutations in our cohort.

Epigenetic analysis is carried out using the MS-MLPA technique, which explores methylation at the targeted region level. We therefore envisage studying the overall methylation of spermatic DNA by the methylation chips.

ORAL COMMUNICATION n°3

Title: Interventions targeted at health professionals versus routine practice to reduce unnecessary caesarean sections

Authors: Mariem Ghardallou^{1,2}, Manel Limam^{1,2}, Jihéne Sahli^{1,2}, Hédi Khairi^{2,3}, Ali Mtiraoui^{1,2}, Thouraya Ajmi^{1,2}

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ABSTRACT:

According to the WHO statement published in 2015, the accepted rate for caesarean sections (CS) must not exceed 10%-15% . In fact, when it is medically justified, a caesarean section can effectively prevent deaths and serious complications in mothers and babies. However, there is no evidence of the benefit of such practice in case of lack of medical need.

In order to improve quality of care and to reduce maternal health costs, the WHO statement highlights the importance of global actions and interventions that target the reduction of medical overdiagnosis and overtreatment.

Currently, the caesarean "culture" has rapidly spread in Tunisian society, particularly over the last decade. In fact, according to The Maternal Death Monitoring Tunisian System (MDMS), the CS rate has been steadily increasing since 1999. In university health care settings, this rate increased from 17.2% in 1999 to 26% in 2006 (4). More recently, the Multiple Indicators Cluster Surveys (MICS 2018) showed a rate of 43.2% .

This increase of cesarean section rate is multifactorial. It can be related to social (maternal request ,..), medical (decline in training and skills to perform forceps and vacuum techniques, ...) or political determinants . Nevertheless, no efforts to reduce this trend have ever been reported in Tunisian setting.

Within a community randomized trial conducted to assess the effectiveness of non clinical interventions targeting health-care professionals (nurses, doctors, midwives, ..)(6), we propose to determine whether health care professionals randomized to non clinical interventions versus those randomized to routine practice allowed the reduction of the caesarean delivery rate and the rate of admissions to the neonatal intensive care unit (NICU).

After the 1-year baseline period, hospitals will be randomly assigned either to the intervention group or the control group.

The intervention consist on educational programmes and training to improve adherence to evidenced-based guidelines combined with audit and feedback about caesarean section practices.

All analyses will be performed with the use of SPSS software.

Sample size:Our sample size calculation will be based on the assumption that a 20% relative risk reduction can be achieved with the intervention: a drop from 30% to 24%.

ORAL COMMUNICATION n°4:

Title: Pesticides and Human Health in Tunisia: The Need for a Human Biomonitoring of Pesticides and New Concept in Agriculture

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ABSTRACT:

Exposure to pesticides and their health impacts remain a major concern for many citizens, professionals, environmental and health protection associations and public authorities. Humans are exposed to pesticides mainly because agricultural practices or ingestion of contaminated food. In the last few decades, pesticides have been related to several adverse health outcomes in epidemiological studies (human biomonitoring). The observational epidemiological approach has its place in helping to identify health disorders and to estimate the risks posed by pesticide exposure. In this field, the measurement of metabolites in human tissues is frequently used for evaluating human exposure. The urine matrix is the most used because excretion is the final phase of elimination of pesticides and their metabolites and analyzed concentrations are normally higher. Various analytical techniques including gas chromatography (GC), gas chromatography/mass spectrometry (GC-MS), liquid chromatography/mass spectrometry, were reported and engaged for the detection of pesticides metabolites in various sample matrices.

Some research has been conducted on the attitudes and knowledge of pesticide users in Tunisia. Inadequate agricultural practices, ignorance of the dangers inherent in pesticides, illiteracy, poor legislation, and lack of enforcement are generally the rule and greatly increase the risks for workers and the general population. The intensive use of pesticides and adverse health effects especially cancers increase the demand for measuring markers of pesticide exposures in human biomonitoring and epidemiologic studies.

Because, the pesticide problem requires a multidisciplinary approach integrating agricultural, educational, socioeconomic, and environmental health research, we propose on the one hand to analyze metabolites in human urine samples and to contribute to invalidate or affirm the existence of a causal link between pesticides and gastric cancers. On the other hand, we suggest determining pesticides residues in fruits and vegetables in relation with detected metabolites, using simple, fast, and inexpensive method. Then, we will raise awareness for the use by farms of integrated crop management methods and more respect of the label instructions on pesticides use, safety and dose.

ORAL COMMUNICATION n°5:

Title: Investigating patients with intellectual disability and multiple congenital anomalies in the genomics era

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ABSTRACT:

Copy number variants (CNVs) are genomic segments which are duplicated or deleted among different individuals. Following the recent technological advances leading to the development of molecular cytogenetic techniques and the emergence of the array comparative genomic hybridization (aCGH), CNVs has gained considerable interest as a source of genetic variation likely to play a role in phenotypic diversity and disease.

Several new genomic disorders caused by CNVs of genes whose dosage is critical for the physiological function of the central nervous system (CNS) have been recently identified.

We applied aCGH in a group of patients presenting CNS anomalies to map novel loci involved in brain malformations. Here, we describe some evidence that CNVs are responsible for congenital CNS anomalies ranging from size anomalies to structural brain malformations and neural migration disorders illustrated, respectively, in patients with microcephaly, agenesis of corpus callosum, lissencephaly and epilepsy, and discuss the mechanisms mediating these rearrangements to suggest candidate genes for the respective disorders within the mapped loci.

The advent of the massive parallel sequencing techniques known as next-generation sequencing (NGS) offer important breakthrough in the diagnosis of genetic diseases at the base-pair level. This represents the next step to further investigate patients with normal aCGH.

ORAL COMMUNICATION n°6:

Title: Towards a Deep Learnig for Lung Cancer Prevention Approach

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ABSTRACT:

Lung cancer is considered to be one of the leading causes of death. The growth in the number of mortalities is due to the very delayed symptoms' detection. Since the lung cancer has often the similar symptoms as the flu, we can only detect the disease at an advanced stage. In addition, lung cancer has other stimulant background factors like the hereditary factors and the patient bad habits that make the terrain favorable for the disease. Many researches dealt with the lung cancer disease, and most of them applied Convolutional neural networks (CNN) with image diagnosis. The problem is that imaging can only detect the disease at a very delayed stage and patient can hardly be saved. In this paper ,we will present our proposed approach called "DeepLCP". The objective of our approach is to calculate the probability of having lung cancer by using personal information such as symptoms ("chest pain", "persistent cough", etc.) and risk factors (the family history of disease, smoking, etc.). To achieve our goal we have chosen to combine the convolutional neural network (CNN) with natural language processing (NLP). Our database is fed from the archive files of patients with lung cancer ,Farhat Hached Hospital in Sousse. During the validation phase the accuracy for our model is 94.59% and 5.41% error rate . As perspectives, we plan to enrich our model and generalize it for the detection of various types of pathologies from raw clinical data. In this regard, we plan to use semantic databases based on ontologies. In addition, we plan to set up a system of recommendation and follow-up for the affected people. Keywords: CNN · NLP · Deeplearning · Lung Cancer Disease · Prevention.

ORAL COMMUNICATION n°7:

Title: Vitamin D as therapeutic alternative for juvenile type 2 diabetes : our promising results

Authors: Meriem Gaddas ¹, Raoudha Kebaili ², Ilhem Kacem ³, Mohamed Solaani ², Jihene Maatoug ⁴, Imed Laatiri ¹, Lamia Boughamoura ²

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ABSTRACT:

Background:

Worldwide, juvenile type 2 diabetes is described as an under-diagnosed and largely under-diagnosed entity. The therapeutic options are so far restricted and not codified. Although the new data approve the beneficial impact of vitamin D and calcium supplementation on pancreatic β cells' function concerning insulin secretion and insulin sensitivity.

Experimentation and Results:

From this perspective, we conducted a pre-experimental and pilot study, which included 35 obese children. Despite an average age of 10.87 ± 1.9 years, all children had insulin resistance associated with hyperinsulinism. These disturbances were noted even in those who had a normo-glycemic profile at the oral glucose tolerance test (OGTT). We also counted two cases of diabetes, one case of glucose intolerance and one case of metabolic syndrome. A defect in the first phase of insulin secretion was detected in 57% of children. After vitamin D and calcium supplementation at therapeutic doses during 3 months, we noted a completely reverse of metabolic disorders in 26.6% of children and a significant decrease in hyperinsulinism (97.1% versus 43.33%) and insulin resistance (100% versus 30%). We found a statistically improvement of glycemic profile of all children and this was explained by a concomitant improvement of insulin secretion.

Perspectives:

These reported results were as alarming about the severity of the metabolic disorders found in obese children as promising concerning the therapeutic efficacy of vitamin D on diabetogenic process. In order to confirm these results, we plan to undertake a large screening campaign targeting all primary schools in Sousse's city. This intervention will enable us to establish a preliminary diagnosis on the extent of this health problem and will be done in collaboration with the school medical services acting in the field. In a second time, we will supplement our action by an effective supplementation in vitamin D and calcium and we will carry out an evaluation by scheduling an OGTT in intra hospital with complete biological assessment in pre and post-therapeutic. Children with metabolic disorders will be treated in specialized consultations.

ORAL COMMUNICATION n°8:

Title: Prevention regimens to promote health: improving nutrition knowledge, practice and attitude for ncd's prevention in workplaces

Authors: Rim Ghammem^{1,3}, Jihene Maatoug^{1,3}, Hela Ghali¹, Nawel Zammit^{1,3}, Sihem Ben Fredj^{1,3}, Amel Amara¹, Abir Berriche¹, Nejib Mrizak^{1,2}, Hassen Ghannem^{1,3}

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ABSTRACT:

Background:

Non-communicable diseases (NCDs) including mainly cancer and cardiovascular diseases (CVDs) have become the leading cause of morbidity and mortality in both developed and developing countries. Dietary factors have been implicated in the cause and prevention of such diseases. Furthermore, workplace health programs have been discussed frequently in recent years as a means for promoting behavior change in the general population.

Aim:

This study will evaluate the feasibility and effectiveness of a workplace based dietary interventions focused on nutrition education, whether with an interactive or lecture program on employees' nutrition knowledge, attitudes and dietary behavior.

Methodology:

The Department of Epidemiology of Sousse will conduct a three-arm quasi experimental study design in two large enterprises based in the community of Sousse, Tunisia with a representative sample of employees. The total study duration is 9 months with 5-months interventions. The intervention and control groups each will consist of one enterprise.

The intervention program will focus mainly on three components: adopting a balanced diet, education employees about health risks of processed food and the indication of use of plastic containers. The training of educators of our team project will be performed by a dietitian, a specialist in agronomy, and a specialist in biochemistry in three-day workshops.

No intervention will be offered in the control workplace. In the first intervention group, the employees will receive the lecture program (posters and leaflets, brochures and pocket booklets, SMS text messaging). For the second intervention group, the employees will receive in addition to the lecture, an interactive program using a Smartphone application, workshops, and a private Facebook group. Also, a physical exam will be done by measuring the biometric data and the blood pressure at baseline and after 5 months of intervention.

Conclusion:

The results of the study may assist in the development of future guidelines to enhance dietary behavior in workplaces. This project will also built capacities of the project team and the occupational staff of the intervention company who can use these skills in other interventions and other populations.

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POSTER 7: Impact of dysthyroidism on male reproductive function

M. Ben Jemaa, S. Daoud, M. Ben Amor, F. Hammami, A. Sellami, N. Chakroun, L. Keskes, T. Rebai
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ABSTRACT:

Introduction

Thyroid hormones have long been considered to have no effect on spermatogenesis or male fertility. But during the last three decades, thyroid hormone receptors have been identified on the testes, suggesting a possible impact on the male reproductive tract.

Pathophysiological mechanisms are controversial. The presence of thyroid hormone receptors in the testes may indicate direct action, as well as changes in basal testosterone production following T3 levels. Another mechanism mentioned in the literature is the induction of SHBG synthesis and the decrease of ABP by T3, which could be involved in maintaining the androgenic environment necessary for the differentiation and maturation of germ cells. Various other mechanisms have been mentioned such as the effect of thyroid hormones on the body mass index which is correlated with testosterone level and SHBG; and the oxidative stress in the testicles following alterations of thyroid hormones. The reactive oxygen species have adverse effects on the plasma membrane of spermatozoa (spz) as well as on nuclear DNA with decreased spz motility and reproductive disorders in these men, but this remains to be proven.

The objective of our research is the study of the impact of dysthyroidism on male reproductive function and the mechanisms involved, as well as the study of the reversibility of this impact after euthyroidism under thyroid treatment.

Methods:

Patients, followed for dysthyroidism, will be referred to us from the endocrinology department of CHU Hedi Chaker of Sfax. For each patient, an examination, a clinical examination and a biological assessment will be carried out before the beginning of the thyroid treatment and then after 6 weeks of treatment. The assessment will include a thyroid assessment, the testosterone and prolactin dosage, a spermogram, a study of the fragmentation of sperm DNA and the status of oxidative stress in spz, as well as other complementary examinations as appropriate.

POSTER 9: Neuro-informatics: challenges for tomorrow's Research and Medicine

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ABSTRACT:

Technological advances in the basic sciences, large-scale clinical studies, are now at the origin of ever more numerous, ever more complex data. Making the most of all these data represents a real scientific and technical challenge with the potential to bring forth new hypotheses on the origin of neurological and psychiatric diseases, and develop technological tools to better diagnose, predict and treat the patients. Techniques such as whole-genome sequencing, advanced imaging (MRI, PET, etc.) or electrophysiology generate data with millions to billions of variables for a large number of individuals. It is necessary to be able to model, combine and analyze these data to draw conclusions and relevant results. Neuroinformatics designs, develops and deploys computer and mathematical tools that allow the use and joint exploitation of all these different types of data. It makes possible the development of predictive models to anticipate the appearance and / or evolution of a disease and to identify so-called early biomarkers to allow early management, even before the onset of visible symptoms. Thus, a center of Neuroinformatics aiming to gather, analyze and make available to the scientists the thousands of scientific and medical data in an open and multidisciplinary approach to research will be a good idea. An open virtual center connects everyone involved in the management and exploitation of research data, and provides them with a common hardware and software infrastructure to ensure the interoperability of their data with those of others. In this way, it contributes to the harmonization and sharing of best practices in data management within the center and relies on a partnership vision of research by coordinating the activities of researchers, engineers, doctors, researchers, computer scientists and technicians; an investment of the future forever more targeted and personalized therapies.

POSTER 10: Therapeutic education of the coronary patient: creation of the program "Coro-CARE"

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ABSTRACT:

Background:

Coronary disease is an acute and serious complication of atherosclerosis. The management of coronary patients cannot be limited to simple information. Hence, the interest of the therapeutic education of the coronary patient that has been highlighted by several types of approaches.

The aim of our project is to create a computerized educational program to homogenize the practices of therapeutic education of the coronary patient between the different health facilities, in order to give the coronary patients the means to maintain the competences of improving their state of health, their quality of life and empower them to take charge of their illness.

Methods:

The therapeutic education program for patients with coronary artery disease is offered for patients with acute coronary syndrome, revascularized (angioplasty or coronary bypass), and stable or asymptomatic angina patients and their families. Our multidisciplinary team consists of a cardiologist, a dietician, a psychologist, and a tobacco specialist. The educational tools used are varied, including a blog, a video clip, a brochure, anatomical boards, and photos.

All tools used will be integrated into a computer program available nationally.

Expected Results:

As a first step, we will identify with the patient his needs and expectations by leading an educational diagnosis. The patient will sign the educational contract. Then the patient can follow a personalized program of therapeutic education. The proposed program consists of five sessions of about 60 to 90 minutes (two individual and three group sessions). Our program is closed by an evaluation made by the patient through evaluation sheets and self-evaluation of the program.

A computer engineer will attend the various sessions in order to be able to convert the various tasks carried out into a computer program.

Conclusion:

Therapeutic education programs are now recommended in hospital cardiology departments or cardiovascular rehabilitation centers. However, some limits exist particularly concerning cooperation between different structures taking care of the patient. The computerization of the therapeutic education program will make it possible to standardize its implementation for the patient's interest.

POSTER 22: Health education via mobile text messaging for glycemic control in adults with type 2 Diabetes

Haoues Maali (Phd c)^{1,2}, Chalbi Souad^{1,2}

¹ Higher School of Sciences and Techniques of Health of Sousse

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ABSTRACT:

Diabetes type 2 is an increasing problem worldwide that may be managed through education. Text messaging using a cell phone can assist with self-care. In this direction, diabetes self-management education (DSME) is a process that helps patients to manage their disease. The goal is to improve metabolic control, prevent related complications, and enhance quality of life. Studies indicated that about 50–80% patients with the Diabetes Mellitus do not have adequate knowledge or skills necessary to effectively manage their disease. Despite well-defined therapeutic and care guidelines for the medical management of diabetes, their quality of life should be improved by effective self-management. Studies has shown that addressing self-management education is an important aspect of glycemic control and can reduce HbA1C by 30–80%. The DSME has also been shown that is effective to increase diabetes knowledge, improve self-monitoring of blood glucose, promote healthy dietary habits, and reduce physical inactivity. Self-care education may also improve adherence to treatment regimens. The DSME is a type of health education program. Well-structured health education may result in patient empowerment and self-efficacy. There are various methods used to achieve these goals. Along with traditional methods that emphasize face- to-face and direct education, there are now more options for delivering health education programs. Many educators and clinicians are now using electronic communications to convey health messages. This type of application may provide a context to educate on any topic, at any time, and in any place, with an emphasis placed on developing skills rather than only mastering knowledge. The aim of this study will be to review the impact of education through mobile text messaging on glycemic control in Tunisian adults with type 2 Diabetes.

POSTER 25: The effect of pilgrimage on the occurrence and aggravation of foot injuries among Hajj pilgrims with diabetes mellitus type 2

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Endocrinology-Diabetology Department , Farhat Hached University Hospital, Sousse.

ABSTRACT:

Background:

Pilgrimage (Hajj) is one of the essential pillars of Islam. Every practicing Muslim, physically and financially capable, is bound by faith to make his pilgrimage to Mecca, Saudi Arabia, at least once in his life.

Since Hajj rituals include long-distance walking (this involves walking 5-15 km per day), pilgrims are at high risk of suffering from trauma and foot injury as they are required to make circuits barefooted on scorching marbles around the Holy Mosque, and march between two hillocks for hours.

An observational study aimed to determine the pattern of these injuries among participants in the Hajj 2013, showed that diabetic pilgrims had more callosities and were at a higher risk of developing infected wounds.

Foot Injuries among Hajj Pilgrims with diabetes mellitus is fewly discussed in the literature hence the interest of our study.

Our aim is to study the effect of pilgrimage on the occurrence and aggravation of foot injuries among Hajj pilgrims with diabetes mellitus type 2.

Methodology:

Type of study: descriptive study

Our target population is represented by people with diabetes mellitus type 2 who will participate in the pilgrimage of the year 2019 and will be recruited from designated health centers for pilgrims in the southern Sousse region.

They will be examined and treated in the Endocrinology-Diabetology Department Farhat Hached University Hospital, Sousse.

Data collection will be done on a well-established form to collect the different data based on an anamnesis and a focused clinical examination. It will be conducted by two investigators while respecting the neutrality. The filling of the form will be practiced by the investigator without influencing the response of the patient.

POSTER 26: The spatial distributions of the maternal mortality and its possible causes using verbal and social autopsy developed by WHO, Alexandria, Egypt

Ramy Ghazy Assistant lecturer of Tropical Health High Institute of Public Health Alexandria University, Egypt

ABSTRACT:

In Egypt, maternal mortality ratio reached to 53 deaths per 100 000 live births in 2003, but it gradually declines to be 43.5 per 100 000 live births in 2015 (UNICEF, WHO, The World Bank, and the United Nations Population Division, 2013). Around 1400 women and 50% of their newborns die each year due to pregnancy and childbirth complications. According to the global standards, MMR is still high in Egypt, so further efforts should be made to apply the main health strategies for reducing it.

Verbal autopsy is a method used to ascertain the cause of a death based on an interview with next of kin or other caregivers. This is done using a standardized questionnaire that elicits information on signs, symptoms, medical history and circumstances preceding death. Geographic visualization of maternal mortality can identify the areas at a national or subnational level where the problem is most severe, and thus could benefit most from interventions. Alternately, it can identify patterns and trends based at lower administrative levels to guide action and response at those levels. As a result, WHO Maternal Death Surveillance and Response framework guidelines emphasize the mapping of maternal deaths counts, MM Rates, and maternal MMRs. In this study, we aim to determine the causes of MMR using the verbal autopsy and social autopsy interview (VASA) tool developed by WHO in Alexandria governorate, and its spatial distribution through application of the geographic information system (GIS) and compare this estimate with that obtained from the most recent demographic health survey

POSTER 27: Nutritional Status of Adolescent and their associated Micronutrient Deficiency as Predictors of Anemia, Alexandria

Ramy Ghazy Assistant lecturer of Tropical Health High Institute of Public Health Alexandria University, Egypt

ABSTRACT:

National authorities need to understand lifestyle risk factors in adolescents in order to develop appropriate programs and policies. There are, however, only limited nationally representative data on behavioral and nutritional risk factors among adolescents in Egypt. In this study we aim to assess nutritional status of adolescent and associated micronutrient deficiency as predictors of anemia, Alexandria.

Africa has the highest percentage of adolescent worldwide (24%). Nearly one in four (22%) Egyptians is an adolescent (ages 10–19) and young adults as a whole (ages 10–24) make up about one third of the population. Egypt's adolescent population (ages 15-24) will grow from 13.8 million in 2000 to an estimated 16.5 million in 2020.

Nearly 35% of the global burden of disease has its roots in adolescence. Health status in adults is mostly an outcome of health behaviors initiated at younger ages such as during adolescence. (4) Several behavioral risk factors such as an unhealthy diet, lack of physical activity, poor personal hygiene and sanitation, stress/depression, drug abuse and tobacco/alcohol consumption warrant special attention among adolescents.

A total 2000 children aged 13–18 years living in Alexandria governorate will be recruited. Schools will be selected with probability proportional to enrolment size using a random start, eight schools will be sampled from secondary or vocational education (Industrial and, commercial Secondary School). Four schools in rural and other four schools in urban areas will be selected randomly. At the second stage, systematic probability sampling with a random start will be used to select classes from each of the sampled schools. All the students in the selected classes will be eligible to participate.

POSTER 28: Non-laboratory questionnaire for Metabolic Syndrome Screening Using Mobile Application among University Students

Ramy Ghazy assistant lecturer of public health High Institute of Public Health
Alexandria University

ABSTRACT:

Non-communicable diseases are noninfectious long term slowly progressing chronic illnesses. They account for 40 million deaths amounting to 70% of the annual global deaths. Cardiovascular diseases (CVD), cancer, chronic respiratory diseases and diabetes mellitus (DM) are its 4 leading entities that collectively account for 32 million annual deaths. Approximately 4.0 (3.2-5.0) million people aged between 20 and 79 years are estimated to die from diabetes in 2017, which is equivalent to one death every eight seconds.

In this study, a cross section survey will be conducted to diagnose metabolic syndrome (MetS); the non-laboratory questionnaire for screening of metabolic syndrom [Encuesta de Identificación de Sujetos etabólicamente Comprometidos en Fase-I (ESF-I)] will be contained within the mobile application. This mobile application will be uploaded to the web site of the selected Universities to be available for use by all students. The mobile application will be used for online screening of students attending Alexandria, Kafr el-sheikh, and Damnhour Universities.

All those exceeding the cut-off point are considered to be at risk for MetS. They will be invited to confirm the condition by undergoing laboratory test. Confirmed cases will be enrolled in a an interventional programme to manage MetS delivered through mobile application that provides them with free individualized health education services. After three months, all of them will be invited to refill the risk assessment tool to compare their score before and after the receiving the health message.

In this study, we aim to develop a reliable and practical tool that easily screens individuals for MetS by a self-assessment score uploaded on the mobile app. This application will represent a continuous accessible domain of a preventive programs providing health education about MetS management and a follow up tool for the affected individuals.

POSTER 31: Acoustic control quality device for stethoscopes.

Sarra BOUBAYA, Eyet El Eslem HNIA.

Family Medicine Residents, Faculty of Medicine of Tunis.

ABSTRACT:

The abstract: In 1816, the idea of using an instrument instead of a bare ear to hear heart and pulmonary sounds came out. It was Dr Laennec who then invented the stethoscope. Since the historical discovery, several changes have been made on the new device over 203 years of evolution. The stethoscope is the most used clinical diagnosis device. However, there is no conventional procedure to control its quality. Almost all physicians and medical students choose their stethoscopes based on their peers' recommendations, its fashionable look or higher price. While parts of the studies comparing the acoustic quality of common stethoscopes are objective, other parts remain subjective; relying only on physicians' hearing. The regulatory institutions, namely the European Medical Device Regulation, the Food and Drug Administration or Health Canada consider the stethoscope to be a class 1 medical device. Still, no conventional procedures were established, nor any objective thresholds in order to tell whether a specific stethoscope is reliable enough. The current control quality of the acoustic stethoscope relies only on the manufacturer. There is a real challenge for the stethoscope's manufacturer to set up a reliable control quality system, and for the regulatory institution, as well, to check it if need be. Considering the development of electronic stethoscopes and ultrasound instruments, some may argue that acoustic stethoscopes are on the way to extinction. This might be the case in fifty or sixty years, when such technologies would become readily available and reachable. Until then, we still need the 203-year-old stethoscope, especially in the poor parts of the world. The aim of this research project is to create a device which can control the acoustic quality of stethoscopes and determine thresholds for acoustic stethoscopes. Making reliable quality control possible would benefit manufacturers and reinforce the efficiency of regulatory institutions. It would also assist physicians to properly diagnose cardio-pulmonary pathological sounds, and continue to save lives.

POSTER 38: Hyperthyroidism in hyperemesis gravidarum.

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1-Departement of Obstetrics and Gynecology University Hospital of Farhat Hached of Sousse

2-Université de Sousse, Faculty of Medicine of Sousse, Department of Family and Community Medicine, Research Laboratory "LR12ES03", 4002, Sousse, Tunisia

ABSTRACT:

Introduction:

Nausea and vomiting are common symptoms during the first trimester of pregnancy and a frequent reason for consultation as well as hospitalization in uncontrollable forms. They complicate 0.5 to 2% of pregnancies it is the first cause of hospitalization in the first quarter. These vomits can reveal a true hyperthyroidism until the unknown.

Objective:

The objective of our study is to specify the characteristics of the hospitalized patients for first trimester vomiting, to look for an association of these vomiting with a biological hyperthyroidism whose purpose is to introduce the thyroidian balance into the systematic etiological assessment of incoidable gravid vomiting.

Material and method:

This is a prospective study of 60 observations collected at the Gynecology-Obstetrics Maternity of Farhat Hached hospital during 2019-2020 with uncontrollable vomiting in first trimesters of pregnancy.

The diagnosis of uncontrollable vomiting in these patients is based on the presence of a state of dehydration and acetonuria greater than or equal to 3 crosses.

Patients recruited do not have endocrinological or gastrointestinal history. These patients will benefit from a thyroid assessment and an ionic balance during their hospitalization.

POSTER 58: Specificities of the Intellectual Development of the Tunisian Child and Adolescent: Test of the Wechsler Intelligence Scale for Children and Adolescents (WISC V) to the Tunisian Population

Lilia Necibi, Tarek Bellaj, PhD,

University of human and social sciences of Tunis.

ABSTRACT:

Psychometrics tests are part of the psychological examination, it should be adapted to people considering their environment and socio-cultural factors. Most particularly, intelligence tests are an essential tool for the psychological assessment of subjects, the diagnosis and the care pathway, affecting not only the area of health but also education and guidance.

In psychology few tests have been adapted to the Tunisian population, unfortunately used despite their non-adaptation, questioning their objectivity and the possible errors. Tunisian clinician psychologist practitioners nowadays have only the adaptation of Differential Scales of Intellectual Efficiency (EDEI), developed in its original form in 1974 and adapted to the Tunisian population by Professor Riadh Ben Rejeb almost 30 years ago, in 1991, for children aged 3 to 11 years old.

Among the solutions, the adaptation of the most widely used test in the world for assessing cognition, the Wechsler Intelligence Scale for Children fifth edition (WISC V) .

Our research project would be to study Tunisian specificities that could influence the material of WISC V to obtain an adapted test to the Tunisian population with digital standards specific to Tunisian children and teenagers. It would be a laborious work that would concern children and adolescents from 6 to 16 years 11 months, girls and boys from all the country. We plan to realize our project in five steps: first, get permission from PEARSON the US owner of the test. Second, prepare a linguistic and semantic bank prior to translation. Third, train a team of psychologists in the handover and interpretation of the test. Fourth, sampling and field. Finally, accomplish the statistical study and adjust the final material.

POSTER 65: Type 1 Diabetes Virtual Education

Haoues Maali (Phd c)^{1,2}, Chelbi Souad^{1,2}

¹ Higher School of Sciences and Techniques of Health of Sousse

² University of Sousse Faculty of Medicine of Sousse

ABSTRACT:

Monitor your blood sugar, inject insulin, have the reflex to eat sugar quickly ... For children with diabetes, these actions are a matter of survival. A video game will be a good idea to help them take ownership of these reflexes. This project idea was launched in France thanks to the therapeutic education platform DiVE (Diabetes Virtual Education) and gave satisfactory results. It will be interesting to test it in our national context. The game can be developed in collaboration with the diabetology services for children and adolescents aged 10 to 18 with type 1 diabetes. It will help them to better understand their illness while having fun. To access it, the patient must have a password, provided by his doctor. He chooses the appearance of his character in the game. The avatar can then walk around the hospital, at home and in the city. As the game progresses, the teenager is led to watch videos, answer questionnaires, and play interactive games... Regularly, he must make choices that take into account his illness: the type of meal when he is in the cafeteria, the place where he puts his blood glucose sensor, whether it is necessary or not to call a doctor in a particular moment. Every time he succeeds, he earns points. He gains, also, experience through simulations of real situations. The game brings him knowledge, but also skills. Young people can even share their experiences and their difficulties. Once a week, collective chats with healthcare professional are organized. They allow answering questions that teenagers ask about their illness but that do not replace in any case a medical consultation. If the caregiver finds that the patient has a problem, he or she redirects it to the specialist who follows it. In total, the game lasts about three hours. The patient do not finish it in one go, it follows the evolution of the treatment. It has six chapters: what is type 1 diabetes; blood sugar and its interpretation; insulin treatment; hypoglycemia and hyperglycemia; glycated hemoglobin; food. At the end of each chapter, the young person's knowledge is evaluated.

POSTER 68: Antibiotic use and bacterial resistance project: diagnostic of the situation in the Charles Nicolle hospital of Tunis 2009-2019

Imene Horrigue¹, Mariem Nouira¹, Amal Smida¹, Chaima Jemai¹, Samir Ennigrou¹

1 : Department Of Epidemiology And Community Medicine, Charles Nicolle Hospital Of Tunis

ABSTRACT:

INTRODUCTION AND AIM : -Antibacterial resistance is a worldwide major public health problem threatening the quality and safety of care, even in Tunisia. -In this perspective, we proposed to evaluate the association between antibiotic use and bacterial resistance in Charles Nicolle Hospital of Tunis (CNH). → **METHODS :**
TYPE AND POPULATION OF THE SURVEY :** - Retrospective longitudinal descriptive survey. - Inclusion criteria: patients hospitalized in adult wards in CNH of Tunis during the survey's period (from 2009 to 2019). ***DATA COLLECT :** There will be two types of informations collected : 1-**ANTIBIOTIC USE:** - Parenteral and oral Antibiotic will be included, data collected from internal hospital pharmacy. - Antibiotic use will be estimated with the following formula : $\text{NUMBER OF DDD}^{**}/1000 \text{ Patient Days}^{} = ((\text{QUANTITY OF ANTIBIOTIC IN GRAMS}/\text{DDD})/\text{NUMBER OF Patient Days}) * 1000$ -**** Defined by WHO -***Collected from the administration**
2-**BACTERIAL RESISTANCE:** -We will only include samples which were isolated for diagnostic purposes and which required an antibiogram. -The percentage of bacterial resistance will be extracted from microbiology laboratory data. -Thirteen couples of Bacteria - Antibiotic were defined to be studied. *** DATA ANALYSIS PLAN:** -Data analysis will be done on two levels : ♣ hospital scale ♣ ward scale -Two principal types of analysis will be done : ♣ Correlation analysis between the percentage of bacterial resistance and antibiotic use for each couple (2009-2019) (scatter plots, Spearman correlation coefficient ..) ♣ Construction of scatter plots (Monnet's Diagram) :Which is divided in four 4 zones according to levels of bacterial resistance and antibiotic use. For each Bacteria – Antibiotic couple, every point will represent the situation of each ward. - Finally we will compare the evolution of antibacterial resistance situation of each ward between 2009 et 2019. → **PRINCIPAL PERSPECTIVE OF THE PROJECT :** -Rationalizing the antibacterial use and Improving the quality of antibacterial prescriptions.

POSTER 69: Project ideas seeking for local and international partners

Yassine Kaloussi , Zied Mhirssi, Internation expert

ABSTRACT:

The Tunisian Center for Public Health (TunCPH) has conducted a study on the availability of breast cancer screening services in Tunisia in 2019. Focus groups with patients and cancer survivors and their families took place to evaluate patient's knowledge, information and education on themes related to cancer screening, care and services. The outcomes of this qualitative assessment have led to the production of multiple videos in Tunisian dialect and a digital information platform on cancer information. The purpose of this research study is to evaluate cancer services, quality of care, accessibility and availability. Methodology should be based on review of documents, stakeholder's interviews, focus groups with patients, satisfaction surveys. A critical area of quality improvement is to improve patient outcome. This study can help stakeholders (e.g., healthcare professionals, managers and policy makers) improve the quality of cancer research and care and lead to patient benefits. Our NGO has a collaboration with the national program.

POSTER 70: EBIC weapon against emergence vector borne diseases in Tunisia

Youmna M'ghirbi, Wasfi Fares, Henda Triki, Ali Bouattour

Laboratory of vectors, viruses, and hosts: one health concept, Institute Pasteur of Tunis, TUNISIA

ABSTRACT:

Vector-borne diseases present a substantial threat to human and animal health worldwide. Their spread is ensured by insect vectors mainly mosquitoes, sandflies, ticks, and fleas. These vectors can carry infective pathogens such as viruses, bacteria, and protozoa, which can be transferred from one host (carrier) to another. In Tunisia, several vector-borne diseases, with national public health concern, occurred during the last two decades; mostly neuroinvasive human infection related to West Nile virus and Toscana virus. Generally, these diseases account for a significant number of human and animal illnesses and deaths each year and are required to be reported to the National Notifiable Diseases Surveillance System. However, vector-borne pathogens are expected to emerge or reemerge due to the interactions between climate change, vector expansion and human behavior.

In this project, we plan to implement an Emergency Biological Intervention Cell (EBIC) to respond to biological emergencies. These emergencies can be epidemics, accidents or potential use of biological weapons, all of which endanger public health. In this context, the EBIC will commit to:

- Respond to microbiological emergencies (bacteria, viruses and typing of pathogens)
- Possess the scientific and technical capabilities of detection and identification in the emergency of infectious agents covered by public health plans, agents of class 2, 3 and 4.
- Respond to the emergence of infectious agents through an operational capability of detection and identification of unknown agents and applied research to develop innovative techniques for the rapid identification of unknown agents.
- Inform the Ministry of Health without delay when any unusual phenomena that may have an impact on public health are detected.

A wide range of infectious agents can be detected and identified at the EBIC in non-emergency situations.

POSTER 73: Her 2 Testing in Tunisian Patients With Digestive Cancers

Belaid Imtinene¹, Hochlaf Makrem¹, Sriha Badreddine², Ezzaairi Faten¹, Chabchoub Imene¹, Ben Fatma Leila¹, Ammar Nouha¹, Mokni Moncef², Ben Ahmed Slim¹.

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ABSTRACT:

Background: Digestive cancers remain a major health issue and a leading cause of cancer death worldwide, although the prevalence and mortality of the disease have gradually decreased.

Many investigations have assessed the role of HER2 in tumors of the digestive system in both prognostic and therapeutic settings, with heterogeneous results. HER2 is an established therapeutic target in gastric cancer. The addition of trastuzumab to first-line chemotherapy has improved the overall survival of patients with HER2-positive gastric cancer, and has become the standard-of-care treatment for this group of patients. HER2-targeted therapies are also being tested in patients with colorectal and biliary tract cancers harbouring HER2 overexpression, and/or amplifications or other mutations of the gene encoding HER2 (*ERBB2*). In Tunisia, Her2 testing and trastuzumab are only available for breast cancers. Data on Her2 overexpression on Tunisian patients with digestive cancers is lacking.

Objectives: We will conduct our study aiming to assess the rate of Her 2 positivity in 200 consecutive digestive cancer patients and to study the prognostic role of HER2 overexpression in these patients.

Methodology

Testing: Test for Her 2 by immuno-histochemistry in 200 consecutive digestive cancer patients. Patients with 2+ IHC will also have FISH done. This will not affect patient management.

Overview of data collection: the principal investigators will maintain and supervise data collection and maintaining records. The patient will be de-identified.

Selection of Study Population

- Inclusion Criteria: 200 consecutive patients with digestive cancer who have a pathology specimen.
- Exclusion Criteria: If histopathology blocks were not available
- Patient consent waiver is applied as this does not affect patient care.

Statistical Analysis: It is an observational study. Testing results will be given as percentage of total population. Overall survival will be estimated using the Kaplan–Meier method. The effect of Her 2 overexpression on survival will be assessed by a univariate analysis using the log-rank test.

POSTER 74: The effects of Emotional Intelligence training on the quality of work life of Tunisian health care workers

Juini sabrine

ABSTRACT:

Background:

The concept of emotional intelligence (EI) has grown in popularity over the last decades, generating interest both at a social and a professional level. Thus, emotionally intelligent persons perceive themselves as confident, better able to understand, control and manage their emotions. That's why emotional intelligence is increasingly discussed as having a potential role in medicine, nursing, and other healthcare disciplines, both for personal mental health and professional practice.

Current theoretical models suggest that EI is a combination of dynamic skills that can be learned and enhanced through participation in targeted intervention programs.

Emotional intelligence training is popular among human resource practitioners, but there is limited evidence of the impact of such training on health care workers.

Objective: The purpose of this study is to examine the effects of EI training on health care quality of work life in Tunisian hospitals.

Methodology:

A quasiexperimental design in 2020-2021 with experimental (training) and control (non training) groups, randomly selected from all Tunisian hospitals, will be developed using Bar-On's Emotional Quotient Inventory and Walton's Quality of Work Life questionnaire.

In line with Clarke framework, we will develop the training interventions based on the organizational context, norms and rules of the workplace that influence emotional display and management by workers.

The questionnaires will be administered to each participant before, immediately after, and one month after the intervention.

The study will compare control and training groups via Pre-post analysis. This approach and the activities within the training will closely reflect the dimensions of Bar-On's measure of EI.

Practice Implications:

This study will demonstrate the practical process through which EI training can improve the work experiences of health care workers, as well as the quality of care in Tunisian hospitals.

POSTER 80: Impact of Total Knee Arthroplasty on Quality of Life and Effectiveness among patients with knee osteoarthritis

Mohamed Ali Khalifa¹, Meriem El Ghardallou², Rym Brahem Jedidi³, Mahdi Jedidi¹, Walid Osman¹, Karim Bouattour¹, Mohamed Laaziz Ben Ayeche¹

1- Orthopedics and trauma Department, Sahloul university hospital, Tunisia

2-Community and preventive medicine Department, Faculty of medicine of Sousse, Tunisia

3- Rehabilitation and Physical Medicine Department, Sahloul university hospital, Tunisia

ABSTRACT:

Osteoarthritis (OA) is a degenerative, disabling and multifactorial disease with a high prevalence that increases exponentially with age. It mainly affects weight bearing joints such as knees and hips, which are the most frequently affected areas. Knee osteoarthritis is more disabling than any other orthopedic and musculoskeletal disorder and it has a huge impact due to its consequences on suffering and function loss and because it damages the well-being and several aspects of Health-Related Quality of Life (HRQL). On the other hand, total knee arthroplasty (TKA) is the operation with the highest clinical success rate, a good prognosis and sustained clinical results in over 95% of the patients after 10 years. Also, it reduces pain and improves function and HRQOL.

In Tunisia, the prevalence of knee osteoarthritis in the population aged 40 and over was estimated at 27.3%. It increases to 49.2% for people aged 60 and over and 52% after age 75 [4]. There are few reports on knee OA and its impact on HRQOL in Tunisia.

Thus, for this project, we propose to assess the impact of knee OA and its clinical intervention (TKA) from the perspective of the perception of the operated patient with regard to HRQOL.

In order to reach our objectives, a quasi-experimental intervention study with a *before and after* design, will be carried out. It is an intervention study on a sample of patients with knee osteoarthritis who were assessed *before and after* the operation of TKA.

The patients will be recruited from patients hospitalised in the department of orthopedics and trauma in Sahloul university hospital during the year 2020. As cases will be considered adult patients of any age and sex with a diagnosis of knee OA who will be operated with TKA and/or with diverse comorbidities. We will exclude patients with disorders and/or pathologies that prevented them from knowing, understanding or assessing their clinical situation.

The Health-Related Quality of Life will be assessed with the questionnaire SF-36.

The data collected from the clinical histories and the results of the SF-36 questionnaire will be analysed with the statistical package SPSS.

POSTER 81: Antimicrobial resistance national survey: incidence and associated factors

Hajer Hannachi, Nadia Jaidane, Mohamed Ben Rejeb, Houyem Said Laatiri

ABSTRACT:

Background: Excessive and inappropriate use of antibiotics is highly associated with the emergence of antibiotic resistance, which presents a major threat to global public health. Antibiotic resistance reduces the effectiveness and number of options for antibiotic treatment, leading to increased morbidity, mortality, and health care expenditures. Data on antimicrobial usage and hospital infections for hospitalized patients is scarce in our country. A national survey in order to estimate the incidence of antimicrobial resistance (AMR) and its risk factors should be conducted. The results of the survey should ideally be based on data from hospitals that are representative of all acute care hospitals within the country. Representative samples could be drawn using a systematic sampling design. Therefore, it is preferable to select a variety of 5-8 hospitals (minimum 5) providing different levels of healthcare (secondary, tertiary or specialized hospitals), and representing different sectors (public, private, university, and others). It is also preferable to choose hospitals conducting AMR surveillance if available. The availability of resistance data, antimicrobial use data, and HAI data will enhance the prevention activities within hospitals. National Frame: we aim to establish a national network of hospitals for antimicrobial national survey. We estimate eight co-investigators and 2 coordinators per hospital to collect data from patient records daily. Aims: 1.To estimate the incidence of antimicrobial use in hospitalized patients for a period of 6 months in the selected hospitals. 2. To measure the incidence of health acquired infections. 3. To provide a standardized tool for hospitals to identify targets for quality improvements and help in designing hospital stewardship programs. Hypothesis: we presume finding elevated incidence of antimicrobial resistant infections because of the over prescription of antibiotics and the auto medication. Thus, Generating continuous data on hospital antimicrobial prescription and use will help our country understand their situation and inform policies to promote prudent antimicrobial use, identify targets for quality improvement in antimicrobial use and implementation of stewardship programs.

POSTER 83: Multidrug resistant bacteria in intensive care units: A prospective observational study

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ABSTRACT:

Background:

Multidrug resistant (MDR) bacteria are one of the most important current threats to public health. Typically, MDR bacteria are associated with nosocomial infections. The multi-resistance of bacteria is a step towards the therapeutic impasse, resulting in a significant mortality and morbidity in health care facilities, particularly in intensive care units (ICUs). Thus, the establishment of monitoring programs, especially in ICUs, is necessary to establish a policy for the fight against MDR bacteria. We aim through our study to determine the incidence of MDR bacteria as well as its associated risk factors.

Methodology:

We will conduct a prospective incidence study in five intensive care units at Sahloul University Hospital in Sousse. Will be included all patients hospitalized for more than 48 hours in the ICU (Date of discharge from ICU \geq Entry day + two days) during the period of survey. Surveillance for each patient will be stopped after the discharge from the ICU or the death. After agreement of the heads of the five intensive care units and confirmation of diagnostic of the main nosocomial infections that will be targets of our investigation, the protocol will be presented to the investigators and the referring doctors of the five ICUs. A pre-test lasting one week will also be carried out before the start date of the investigation itself to ensure the feasibility of the study and train the interviewers in the collection methodology. The data collection will be provided by a resident doctor from hygiene department and another from each unit. A regular discussion of cases of infections or problem cases will be conducted at within the medical team to validate the information collected. Since this is an active surveillance, the data must be collected in real time to enable our department to establish the necessary measures limiting the risk of cross-transmission.

Conclusion:

Epidemiological surveillance is a mandatory priority to guide and better target prevention programs, and to make easier the control and evaluation of actions undertaken. Surveillance is the first measure to be taken to reduce the threat of MDR bacteria in hospitalized patients.

POSTER 86: Adherence to medication in hypertensive patients: assessment of determinants of Blood Pressure Control in health care centers in Tunisia

Ghali Hela¹, Zammit Nawel^{1,2}, Ghammam Rim^{1,2}, Amara Amel¹, Ben Fredj Sihem^{1,2}, Berriche Abir¹, Maatoug Jihen^{1,2}, Ghannem Hassen^{1,2}

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ABSTRACT:

Background:

Adherence to therapies is crucial for treatment success. However, the World Health Organisation estimates that only 50% of patients who suffer from chronic diseases adhere to treatment recommendations. Similarly, among patients with hypertension, it has been estimated that only 30-50% of patients regularly take their antihypertensive drugs as prescribed. In Tunisia, the highest level of control of blood pressure was estimated to 24.1% as reported in the TAHINA study.

Aim:

To evaluate the control of hypertension in patients followed at different levels of health care in the public sector, and to identify the determinants of a well blood pressure control profile among Tunisian patients.

Methods/Design:

A national cross sectional study will be conducted in Tunisia, for the three levels of Tunisian healthcare system. The sample will be selected from primary, secondary and tertiary health care centers within the urban and rural areas of each governorate. Patients followed for essential hypertension and with a minimum of one year of follow-up will be eligible for the study. Assuming a prevalence of 24.1% for controlled hypertension, 95% confidence interval and 3% precision level and a cluster effect of 3 with a drop-out rate of 5%; sample size of 2460 patients was estimated. We will enroll study participants by a two-stage and proportional sampling with cluster selection strategy to get a representative sample. A structured questionnaire will be used composed of several sections to address adherence determinants at different levels, including the patient, caregiver/family, provider and/or healthcare system, and the treatment itself.

Conclusion:

Adherence is the extent to which a person's behavior is consistent with health care recommendations. Improving adherence to appropriate prescriptions may represent the best investment for improving blood pressure control in hypertensive patients.

POSTER 92: Addictive behaviors prevention program in the school settings in the municipality of enfidha-sousse

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ABSTRACT:

Abstract and goals: Throughout past years, several studies have underscored wide-ranging health consequences of substantial effects of addictions which remain a major social and public health problem because of the damage it causes, its consequences in terms of insecurity, traffic and delinquency. Hence, adolescence is in fact a time of important social development marked by the growing influence of peers, individual behavioral choices, and increased risk-taking behavior which make this age range the most vulnerable and more prone to addictive behaviors and mental disorders.

The specific objective: Improving knowledge, attitudes and behavior regarding addictive behavior among school children.

Methods: A quasi-experimental study will be conducted. The target population will be the middle and high schools' students between 13-19 years of age. The intervention will last four months. Various actions at different levels will be planned in collaboration with the commune, commission of evaluation of the academic results, department of Epidemiology (FH), Faculty of medicine of Sousse, Society of family medicine of Sousse, associations, NGOs, Industrial Companies etc... It will include training and sensitization actions of teachers and parents and actions targeting pupils. In the intervention group we will work on smoking cessation information day for smokers, creation clubs and listening cells. We will use also social media, a play store application, SMS in order to enhance adolescents to adhere to our program. Physical and artistic events will be organized in this aim also. Finally we will work hard on workshops led by experts and psychologists in matters of development of psycho-social skills and self-esteem.

Conclusion: Our findings may help setting programs and establishing preventive policies to tackle this scourge. Sensitizing parents and teachers about the strong effects of addictions and its risk factors seems to be substantial. This intervention will allow us also to form peers and work team able and competent to maintain this program further.

POSTER 93: Evaluation of the effectiveness of a pre-amniocentesis counseling on anticipated and perceived levels of pain and anxiety among pregnant women: A protocol study of a randomized controlled trial

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ABSTRACT

Background

Recent developments in pregnancy monitoring, in particular advances in ultrasound and the generalization of the first-trimester screening have led to the increase of the practice of the amniocentesis in order to confirm the existence of fetal chromosomal abnormalities. It is a painful and stressful procedure for the mother. It has been also suggested that maternal anxiety during amniocentesis may prolong the procedure and increases the probability of side effects. While waiting for amniocentesis, patients can be subjected to significant anxiety amplified by defective prior information.

Aim

The aim of this study is to assess the impact of counselling provided to patients prior to amniocentesis on anticipated and experienced levels of anxiety and pain.

Methods

This is a controlled randomized trial that will be conducted among women who will undergo amniocentesis in the Department of Obstetrics and Gynecology of the University Hospital Farhat Hached of Sousse. The intervention will consist on a pre-amniocentesis counselling for the intervention group, while the control group will have the routine procedure. Considering a difference of 10 points between the intervention and the control group on the analogic visual scale (AVS) of pain and anxiety, a type one error of 5% and a type 2 error of 20% and a common standard deviation of 25, the minimal sample size needed for this study is 107 patients in each group. Information received prior to amniocentesis, level of knowledge about amniocentesis and sources of information will be assessed using a face to face questionnaire before the procedure in the two groups. Anxiety and pain levels will be measured using analogue visual scales before and after the counselling and after the procedure for the intervention group; and for the control group before and after amniocentesis.

Conclusion and perspectives

It is well documented that patients prefer to be informed about their diseases, treatments and procedures. Within this study, we will focus on the necessity of implementing a systemically pre-amniocentesis counselling to improve the quality and transparency of information offered to pregnant women.

POSTER 94: The use of medicinal plants among Primary Health Care Centers' visitors in the region of Sousse (Tunisia)

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ABSTRACT

Problematic:

Humans have developed a broad knowledge about useful plants over time through the continuous contact with natural environment. The traditional uses of medicinal plants in healthcare practices are providing clues to new areas of research. The lack of access to conventional health care, historical, cultural and economic considerations contributes to the persistent and important use of these plants.

However, this subject is often poorly explored by health professionals and there is little data concerning the Arab population with its particular traditions and more particularly in Tunisia.

As part of a cooperation project with the Japanese "Science and Technology Research Partnership for Sustainable Development (SATREPS)" entitled "Valorization of bioresearch in semi and arid region", so we conducted this study in the region of Sousse (Tunisia).

Aims:

The purpose of this study was to describe the traditional use of medicinal plants by primary Health Care Centers' visitors in the region of Sousse (Tunisia) and to identify reasons of this practice.

Methods:

We conducted a cross-sectional descriptive study among Primary health care centers' visitors (patients and accompanying persons) of the region of Sousse (Tunisia) in 2018. We randomly selected 18 primary health centers and 50 participants were chosen from each center. Data were collected using a pre-tested questionnaire, filled through a direct interview with participants which explores: socio-demographic variables and medicinal plants' use (reasons, name of plants, for which symptoms, methods of preparation (infusion, decoction, fumigation, drops...), routes of administration (drinking, eating, inhalation, swallowing, local application, chewing, ...), duration of use, plant source, tolerance and side effects, degree of satisfaction,).

Conclusions and perspectives:

The contribution of herbal medicine to the modern health care system should be based on scientific validity, conditions of use and potential adverse effects should be better defined. So it seems essential to train health professionals on this herbal therapy during their studies and practice and also to promote a better patient-doctor communication. It is interesting that this use will be based on well-conducted scientific results specifying the mechanism of action of the plants, the therapeutic and toxic dose through researches on local plants samples and extracts and also we have to develop a phyto-vigilance center for the notification of adverse effects.

POSTER 95: Comprehensive internet and mobile intervention program to promote healthy lifestyle among the adolescents of Sousse, Tunisia.

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ABSTRACT:

Challenge:

Adolescence is a critical period frequently accompanied by mood disturbance and behavior's deterioration including poor diet, sedentary behavior in addition to substances experimentation and violence. These risk behaviors have several adverse consequences at short and long term. Indeed, there is a tracking of risk factors from childhood to adulthood as well as tenacity among adults towards behavioral modifications. Accordingly, the earlier a healthy lifestyle is adopted, the better it would be.

In Tunisia, recent national data indicated that the prevalence of: lifetime tobacco use, lifetime alcohol consumption, lifetime cannabis use, and obesity were respectively: 25.1%, 6.3%, 3.8% and 5% among adolescents. Reducing this burden via lifestyle modification has, therefore, become an urgent public health priority.

Proposed solution:

Our project consists on an internet and mobile prevention program among adolescents. In fact, high proportion of adolescents uses information and communication technologies to learn about topics that are hard to discuss. These technologies could provide therefore an alternative vehicle for delivering health interventions among them.

Our objective is to fight against adolescent's risk behaviors acquisition. It shall respond to the 3^d Sustainable Development Goal highlighted in the 2030 Agenda which aims to ensure healthy lives and promote well-being for all at all ages. It is also connected to the 6th global challenge: "How can the global convergence of information and communications technologies work for everyone?"

We will target not only the adolescents, but also their parents, their educators, the medical school staff and the community key informants.

Replication potential:

Although the intervention will end, several products and services will remain. The content that will be created for the program will remain. Training of the project team will serve as training for trainers. Training of the educators would serve to provide continue prevention services for adolescents. Additionally, a report of this study will be presented to health and education ministries which could generalize it through a national prevention program.

POSTER 96: Prevalence and risk factors of Hepatitis E virus infection in HIV-infected patients: results of a Tunisian study

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ABSTRACT:

Background: Data on seroprevalence of hepatitis E virus (HEV) in HIV-infected patients vary significantly in different areas of the world. Some researchers report no difference in HEV seroprevalence between HIV patients and control subjects, while others consider that HIV-infected individuals are at risk for HEV infection but evidence is lacking on if they can be considered a high risk group. In addition, CD4 counts and antiretroviral therapy may play a role in persistence of hepatitis E infection but no evidence has been found yet. In Tunisia, the epidemiology of HEV is not well known. Previous studies have been conducted among healthy individuals and reported controversial results. No data is available about prevalence of HEV infection among HIV-infected individuals.

Objectives: The aims of present study were:

1. To document the anti-HEV seroprevalence in HIV-infected patients and to compare it with that of a control population.
2. To characterize the risk of exposure to HEV infection in HIV-infected population.

Materials and Methods

➤ Samples collection Approach

A case-control study will be carried out in Infectious Disease Department of Farhat Hached Hospital in Sousse:

- **100 consecutive, unselected HIV-infection** patients will be enrolled.
- **100 blood donors** will be used from our bank of sera as a control group that will be matched similar with respect to age, region and sex.
- Demographic, lifestyle and laboratory data will be recorded for each participant in a predesigned questionnaire.
- Serological Approach
- HEV IgG/IgM will be detected in serum using a commercial enzyme immunoassay (HEV IgG and IgM, EUROIMMUN, Germany).
- Molecular Approach
- HEV-RNA will be amplified by reverse transcriptase (RT)-nested PCR in all serum samples with IgM anti-HEV.

Project Timeline

- From March 2019 to May 2019: Ethical and administrative procedures.
- From June 2019 to December 2019 (6 months): Sample Collection: Currently, 76 HIV-infected patients were enrolled.
- January 2020: selection of the 100 Blood donors.
- February 2020: Serological analysis.
- From March 2020 to May 2020: Molecular analysis: seeking for local or international collaboration to ensure this step.
- June 2020: Statistical analysis.

POSTER 97: Specificities of the Intellectual Development of the Tunisian Child and Adolescent: Adaptation of the Wechsler Intelligence Scale for Children and Adolescents - fifth edition WISC-V to the Tunisian Population

Lilia Necibi, Tarek Bellaj, PhD, University of human and social sciences of Tunis.

ABSTRACT:

Background:

Psychometrics tests are part of the psychological examination and should be adapted to people considering their environment and socio-cultural factors. Most particularly, intelligence tests are an essential tool for the psychological assessment of subjects, the diagnosis and the care pathway, affecting not only the area of health but also education and guidance.

What about Tunisia ?

In psychology few tests have been adapted to the Tunisian population, unfortunately used despite their non-adaptation, questioning their objectivity and the possible errors. The Tunisian adaptation of the D. Wechsler WISC V intelligence test, the most widely used test in the world for assessing cognition, would then be relevant in the field because clinician psychologist practitioners nowadays only have an intellectual evaluation of the adaptation of Differential Scales of Intellectual Efficiency (EDEI), developed in its original form in 1974 and adapted to the Tunisian population by Professor Riadh Ben Rejeb almost 30 years ago, in 1991, for children aged 3 to 11 years old.

What is our research project idea ?

Our research project would be to study Tunisian specificities that could influence the material of WISC V to obtain an adapted test to the Tunisian population with digital standards specific to Tunisian children and teenagers. It would be a laborious work that would concern children and adolescents from 6 to 16 years 11 months, girls and boys from all the country.

POSTER 99: Pathogenesis of congenital CMV infection in pregnancy and the neonate

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ABSTRACT:

Cytomegalovirus (CMV) is a beta-herpesvirus that infects 40% to 100% of the adult population worldwide. It is the most common cause of congenital infection worldwide and an important cause of morbidity and mortality in immunocompromised individuals. According to the CDC, CMV is the leading viral cause of birth defects, including sensorineural hearing loss and central nervous system damage.

Despite the importance of CMV infection to overall health current understanding of the disease mechanisms, available options for treatment /intervention and prevention strategies are limited. There is no licensed CMV vaccine. Treatment of CMV infection is challenging because of the side effects of antiviral drugs and the emergence of drug-resistant strains.

A vaccine against CMV is a major public health priority, and would have potential benefits not only for women of childbearing age (to prevent sequelae of congenital CMV infection) but also for transplant patients. The essential glycoprotein targets remain unclear. Clinical trials demonstrated that the subunit vaccine based on glycoprotein (g)gB, which had been believed to be the most important target for neutralization failed to induce sufficient protective immunity. On the other hand, recently it has been reported that a pentameric complex (pentamer), which is made up of gH/gL/UL128/UL130/131 is required for entry into epithelial and endothelial cells. It was found that antibodies targeting the CMV pentameric complex are able to neutralize genetically diverse clinical isolates of CMV. Moreover, pentamer proteins are able to induce strong neutralizing antibodies, a thousandfold more than gB or gH/ gL. The pathogenesis of CMV depends on a combination of host immune responses and viral factors. One potential viral factor that may be associated with different clinical outcomes is genomic polymorphism in genes encoding envelope glycoproteins. These polymorphisms could potentially be associated with variability in the control of virus infection.

Understanding the pathogenesis of infection from the mother to the neonate is crucial especially in vaccine and anti-viral therapy development of the pregnant woman and the neonate. For this purpose, our future research will include determining the prevalence of infection in pregnant women, the incidence of congenital CMV infection, genomic characterization in the genes encoding the pentamer *and correlation with clinical and immunological characteristics.*

POSTER 100: Hepatitis Delta virus infection in Central Tunisia: epidemiological, clinical and virological data

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Background:

Hepatitis delta virus (HDV) is a defective virus whose replication in human hepatocytes requires the presence of hepatitis B virus (HBV). The transmission of HDV is mostly parenteral and less frequently sexual or intrafamilial. Two patterns of HDV infection are described: coinfection with HBV which could be self-limited and super infection with a risk of either fulminant hepatitis or cirrhosis and hepatocellular carcinoma. In the world, almost twenty million people have HBV-HDV coinfection. In Tunisia which is a middle endemicity area for HBV infection, little is known about HDV infection.

Objectives:

- Evaluate the frequency of Delta viral infection in Central Tunisia in groups of patients with different serological HBV markers
- Compare clinical and laboratory characteristics between patients with simultaneous HDV/HBV contamination and those with HDV super infection in chronic HBV carriers
- Genotype the viral B strains to determine the relationship between VHB genotype and Delta superinfection.

Materials and Methods:

Samples collection Approach: A prospective study will be carried out in the external consultation of infectious diseases of the Farhat Hached university hospital in Sousse

250 unselected chronic HBV infected patients will be recruited

Demographic and epidemiological data will be recorded for each participant in a predesigned questionnaire such as: age, dental care, surgical hospitalization, alcohol addiction, unprotected sexual relationships, intravenous drug use, history of blood transfusion or infected family member, tattooing, scarification, health staff member.

Serological Approach: HBV and HDV will be detected in serum:

HBsAg, HBsAb, HBeAg, HBeAb and HBcAb will be performed using commercial assays

HDV screening will be performed by detection of total HDV-Abs in serum using the ELISA test.

Molecular Approach: Extraction of viral DNA-HBV and viral RNA-HDV, PCR amplification and HBV genotyping will be performed

Project Timeline

From December 2019 to February 2020: Ethical and administrative procedures.

From March 2020 to May 2020: Sample Collection

Jun 2020: Serological analysis.

From July 2020 to September 2020: Molecular analysis: **Seeking for local or international collaboration to ensure this step.**

October 2020: Statistical analysis.

POSTER 101: Comprehensive sexual education through serious games

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2- SociétéTunisienne de Sexologie Clinique

The importance of a comprehensive sexual education is nowadays a certainty advocated for by several international organizations such as the World Health Organization and the UNESCO. Even if some effort is made by governments and NGOs to develop national programs for comprehensive sexual education, the actual application and adoption of such programs is confronted with several obstacles and hurdles such as a lack of educators and the difficulty to implement the comprehensive sexual education program into the already overloaded educational programs. This comprehensive sexual education program is essentially directed to children and adolescents. But one of the characteristics of this young generation is its “addiction” to screens and its intuition towards new technologies such as computers, smart phones and video games. In fact, children nowadays are born in a world where the World Wide Web is a reality and the connectivity a necessity. Based on these considerations, the obvious solution of creating a serious video game to educate children comprehensively about sexuality seemed obvious. The program will be created following the UNESCO recommendations but the pedagogic content should be created in order to be integrated in an 8 levels’s educational game created for children that can evolve with them and there reality.

POSTER 102: Measuring and promoting the appliance of human rights for sexual and reproductive health in the MENA region

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2- SociétéTunisienne de Sexologie Clinique

ABSTRACT:

The importance of sexual and reproductive health and rights for the empowerment of women and girls in association to education, economic empowerment and political participation is well established. But, currently, there is no tool to measure the gap, unfortunately still too often perceived, between the reality of practices, often insufficient, and the theory of international and national legislation in the MENA region. It is urgent and necessary to create a practical tool that integrates human rights concepts (and methods) to identify the causes of the barriers to access and enjoyment of the rights to sexual and reproductive health and to propose solutions that strengthen the efforts of governments and NGOs in planning and sustaining sexual and reproductive health around a joint sexual and reproductive health education program for the MENA region.

The goals and aims of this program are to :

- Develop, test and validate a tool to analyse the barriers to the enjoyment of sexual and reproductive health and rights in the MENA region to identify factors associated with poor sexual and reproductive health.
- Collect scientific data on the sexual and reproductive health status of vulnerable groups in the MENA region using this tool.
- Promote the use of this tool among governmental and non-governmental actors involved in the promotion of sexual and reproductive health and rights in the MENA region
- Establish a program and strategy for sexual and reproductive health education emerging from the data collected and encourage its effective application in the MENA region
- Propose recommendations that take into account the needs of sexual and reproductive health and rights of vulnerable people; and working to address political barriers to access to information and services for different groups
- Encourage the adoption of these recommendations by policy makers in the MENA region.

POSTER 103: Is the microbiota the key for enhanced rehabilitation programs after caesarean section?

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ABSTRACT:

Despite the recommendations of the World Health Organisation to reduce the rate of the caesarean section, this surgery is the most common in obstetrics all around the world. To secure the post-operative quality of life of the patients and lower their morbidity and mortality, several early rehabilitation programs have been established and validated. One of the main changes in all these protocols is the reduction of the fasting period before and after the surgery, with early feeding. Several studies and especially randomized controlled trials have shown the efficacy of such protocols in fastening the post-operative recovery in addition to enhancing the intestinal mobility.

One of the hypothesis proposed to explain such success is the influence of this new feeding regimen on the gut's microbiota of these women leading to the activation of signals in the central nervous system stimulating the intestinal mobility on the one hand and the immune system on the other hand to lower the incidence of post-operative septic complications. This hypothesis is based on the fundamental and ex vivo studies that have reported a model of activation of the immune system on the one hand and of the nervous system on the other hand by changes in the gut's microbiota.

In order to verify this theory, we aim to create a research unit specialized in the identification and measurement of the mother's microbiota during the pregnancy and the post-partum in order to evaluate its impact on the mother and child wellbeing during and after the pregnan

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POSTER 1

Tunisian experience in health democracy: Societal Dialogue for National Health Policies, Strategies and Plans

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Key-words : Societal Dialogue - Health Policy - Health System - Citizen Participation - Citizen Jury - Health Planning - Health Democracy

Background :

Tunisia is currently through its second phase of the Societal Dialogue for Health System Reform to develop a National Health Policy 2030. This work aims to contribute to the documentation of the societal dialogue process. It will allow the different partners to have an overview of the contribution of this process in health planning as well as the success factors as well as the challenges of the model in relation to international norms and experiences.

Methods :

This work was based on a qualitative analysis of semi-structured interviews with citizen juries and experts that took place from May 2018 to September 2018. The qualitative analysis was done according to a cross-matrix between the themes of the interview of the two groups of interviewees. The analysis of the data was mixed: a coding of the data collected was done beforehand. However this frame has been adjusted according to the transcriptions.

Results :

The qualitative analysis of the data highlighted four axes: the context of initiation of the societal dialogue and the passage from the claim to the political instrumentalization, the citizen participation and the role of the various actors, the mixed perception of the societal dialogue and the crisis of trust, the methodology of the social dialogue process, especially the "Citizen Jury" method.

The main factors of success of the societal dialogue are the commitment of the actors, the political will, the inclusivity and the multidisciplinary of the process and finally the communication around the process. The main challenges are the non-ownership of the process by the policies and the different stakeholders as well as the doubt about the achievement of these results.

Conclusion :

It is important to introduce regular citizen and societal consultation so that it can credibly feed into policy review processes and inform policy makers on a regular basis. It would be important to think of a model for the sustainability of this approach. This involves finding the necessary financial and operational means

POSTER 2

Child and maternal factors associated with pain and quality of life of children with cerebral palsy

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Introduction: Cerebral palsy (CP) may cause chronic pain and deterioration of quality of life (QOL) in children. It can thus impose a physical and psychosocial burden on their mothers. Our aim is to analyze the influence of motor severity of PC, maternal stress and pain on chronic pain and QOL of children with CP.

Methodology: We conducted a predictive correlational study among 132 mother-child dyads in the departments of physical medicine and functional rehabilitation of Sahloul university hospital in Sousse and Ibn Eljazzar in Kairouan, and the department of Neuropediatrics of Mongi-Ben Hamida National Institute of Neurology in Tunis. We used the following instruments: Gross Motor Function Classification System (GMFCS), the Cerebral Palsy Quality of Life Questionnaire (CP QOL, Arabic Version), the Visual Analogue Scale (EVA) and the Perceived Stress Scale (PSS, Arabic Version).

Results: As expected, we were able to confirm most of our assumptions. The motor severity of CP partly explains poor QOL, which is more impaired for the physical than psychosocial domain. Also, an increase in child chronic pain is due in part to the motor severity. There is a significant negative correlation between the child's EVA and CP QOL. Maternal stress is a partial predictor of deterioration of QOL and of increase in child chronic pain. However, maternal pain partly explains the decrease in CP QOL. But it partially explains the increase in child's EVA. The increase in GMFCS is partly responsible for the increase in both stress and pain of mothers. Maternal stress has a partial and negative mediating effect (Sobel test = -4.073, $p < 0.001$) on the relationship between GMFCS and QOL. And it has another partial but positive effect (Sobel test = 2.964, $p = 0.003$) on the relationship between the GMFCS and child's EVA. We found partial positive mediation (Sobel test = 2.505, $p = 0.012$) of maternal pain on the influence of GMFCS on infant pain, but this mediation is absent between GMFCS and QOL.

Conclusion: According to our findings, interventions should target the reduction of stress and maternal pain to improve QOL and pain of children with CP.

Keywords: Cerebral palsy, Children, Mothers, Pain, Motor impairment, Quality of life, Stress

POSTER 3

Trend in burden of cervix cancer in Tunisia between 1990 and 2017

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Introduction :

Worldwide, cervix cancer is the first incident and fatal gynecological cancer among women according to Globocan 2018 estimates.

In Tunisia, there are few studies interested in the burden of cervix cancer.

The objective of this study was to analyze the trend in the burden of disease in cervix cancer in Tunisia between 1990 and 2017.

Methods:

This is a study using data estimated by the Institute for Health Metrics and Evaluation (IHME) for years of life by cervix cancer in Tunisia between 1990 and 2017. The DALY (Disability Adjusted Life Years) measure integrates premature mortality (YLL or Years of Life Lost) and disability (YLD: Years Lived with Disability). $DALYs = YLLs + YLDs$. Crude and age standardized rate were expressed per 100 000 women. The trend analysis of age standardized DALY, YLL and YLD rates between 1990 and 2017 was analyzed by using JoinPoint software. The Annual percent change APC and its 95% Confidence Interval was calculated using the data between 1990 and 2017.

Results:

During the study period, the trend of DALY's rate was stable for crude rate:

APC=-0.1% (95% CI =[-0.2% to 0,0%]) and downward for standardized rate:

APC= -1.9% (IC à 95%= [-2.1% to -1.8%])

The rate of DALYs passed for 68.2/100 000 women in 1990 to 71.0/100 000 women in 2017 and for 98.7/100 000 women in 1990 to 62.1/100 000 women in 2017 for crude and standardized rate respectively.

The trend of YLLs rate was downward for crude and standardized rate:

APC=-0.1% (95% CI= [-0.2% to -0,0%]) and APC = APC=-2.0% (95% CI =[-2.1% to -1.8%]) for crude and standardized rate respectively.

The rate of YLLs decreased for 65.5/100 000 women in 1990 to 67.8/100 000 women in 2017 and for 95.0/100 000 women in 1990 to 59.3/100 000 women in 2017 for crude and standardized rate respectively.

The trend of YLDs rate was upward for crude rate: APC=+3.0% (95% CI=[+2.8% to +3.2%]) and downward for standardized rate: APC=-1.4% (95% CI= [-1.5% to -1.2%]).

The rate of YLDs increased for 1.4/100 000 women in 1990 to 3.4/100 000 women in 2017 and decreased for 3.7/100 000 women in 1990 to 2.7/100 000 women in 2017 for crude and standardized rate respectively.

Conclusion:

The disease burden trend of cervix cancer is decreasing. Increased screening is recommended to continue fighting this disease.

POSTER 4

Trend in burden of thyroid cancer in Tunisia between 1990 and 2017

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Background:

Thyroid cancer is the first ENT cancer incident in the world, according to Globocan 2018 estimates. In Tunisia, few studies have studied the burden of morbidity of this cancer, hence the value of this work. The aim of our study was to analyze the trend in burden of thyroid cancer in Tunisia between 1990 and 2017.

Methods:

This is a study using data estimated by the Institute for Health Metrics and Evaluation (IHME) for years of life by thyroid cancer in Tunisia between 1990 and 2017. The DALY (Disability Adjusted Life Years) measure integrates premature mortality (YLL or Years of Life Lost) and disability (YLD: Years Lived with Disability). $DALYs = YLLs + YLDs$. Crude and age standardized rate were expressed per 100 000 women. The trend analysis of age standardized DALY, YLL and YLD rates between 1990 and 2017 was analyzed by using JoinPoint software. The Annual percent change (APC) and its 95% Confidence Interval was calculated using the data between 1990 and 2017.

Results:

Between 1990 and 2017, the standardized DALY rate increased from 8.2/100,000 persons in 1990 to 9.2/100,000 persons in 2017 and decreased from 14.5/100,000 persons in 1990 to 14.2/100,000 persons in 2017, for male and female respectively.

The APC was +0.2% (95% Confidence Interval CI=[0.0% to 0.3%]) and -0.2%(95% CI=[-0.3% to -0.1%]) respectively for male and female.

The standardized YLL rate passed from 7.8/100,000 persons in 1990 to 8.3/100,000 persons in 2017 and decreased from 13.0/100,000 persons in 1990 to 11.2/100,000 persons in 2017, respectively for male and female.

The APC was 0.0% (95 %CI=[-0.2% to +0.2%]) and -0.7%(95% CI=[-0.8% to -0.5%]) for male and female, respectively.

The standardized YLD rate increased from 0.4/100,000 persons in 1990 to 0.8/100,000 persons in 2017 and from 1.5/100,000 persons in 1990 to 3.0/100,000 persons in 2017, respectively for male and female.

The APC was +2.5% (95 %CI=[+2.3% to +2.7%]) and +2.3%(95% CI=[+2.0% to +2.6%]) for respectively male and female.

Conclusion:

The trend in the burden of thyroid cancer shows a significant decrease in the female sex in contrast to the male sex. Improved support is strongly recommended.

POSTER 5

Burden of uterine cancer in Tunisia in 2017 and projection by 2030

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Background:

Worldwide, uterine cancer is a public health problem. In Tunisia, few studies are interested about burden of disease of this cancer. The aim of our study was to analyze burden of uterine cancer in Tunisia in 2017 and its projection by 2030.

Methods:

This is a study using data estimated by the Institute for Health Metrics and Evaluation (IHME) for years of life by uterine cancer in Tunisia in 2017.

The DALY (Disability Adjusted Life Years) measure integrates premature mortality (YLL or Years of Life Lost) and disability (YLD: Years Lived with Disability). $DALYs = YLLs + YLDs$.

The age standardized rate of DALYs and YLLs were expressed per 100,000 women.

Demographic data were provided by the National institute of statistics. The projection of the number of DALY and YLL by 2030 was performed by a Poisson Regression analysis with Age -Period -Cohort (APC) using SPSS software, while using IHME estimated data for the period 1990-2017.

Results:

In 2017, the number of DALYs attributable to uterine cancer was 1608 representing 15.4% of total DALYs of gynecological cancers. For YLLs, the number was 9911 representing 14.8% total DALYs of gynecological cancers. The rate of DALYs was 28.0/100 000 women and 25.2/100 000 women respectively for crude and age standardized rate. The rate of YLLs was 25.5/100 000 women and 23.0/100 000 women respectively for crude and age standardized rate.

The burden of disease by age distribution showed a steady increase with a peak at age 70-74. Premature mortality accounted for the greatest part of total DALYs (91.2%).

On the basis to the same conditions between 1990 and 2017, the predict number of DALYs in 2030 will reach 2203 representing 33.7/100 000 women (95% CI= [32.1/100 000 to 35.4/100 000]) and 25.1/100 000 women [23.8/100 000 to 26.4/100 000] respectively for crude and age standardized rate. For YLLs, the predict number will reach 1971 representing 30.1/100 000 women [28.6/100 000 to 31.8/100 000] et de 22.4/100 000 women [21.2/100 000 à 23.7/100 000] respectively for crude and age standardized rate.

Conclusion:

The burden of uterine cancer is high, especially in post-menopausal women, and continues to increase. It is imperative to improve the management of diagnosis and treatment.

POSTER 6

Development and validation of an Arabic questionnaire for fertility knowledge assessment among reproductive-aged population.

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Key Words: Fertility, Tunisian population, risk factors, questionnaire

Introduction: Fertility knowledge is an important factor that can influence individuals and couples' fertility behavior. Numerous reports have highlighted a lack of information about fertility in the general population, especially in relation to risk factors for infertility and treatment beliefs. However, few data are available about such issues among Tunisian population, and Arabic-speaking countries in general. The aim of this study was to develop and validate an arabic questionnaire that measures fertility knowledge among the reproductive-aged population.

Methods: The development of the questionnaire was a result of several validation procedures: review of the literature and items selection by an experts group for the development of preliminary versions, and a pre-test on a sample of reproductive-aged respondents followed by statistical analysis for the validation of the final version. The latter contained items related to infertility risk factors and treatment.

RESULTS: Males and females aged 18 years old and above have responded anonymously to the questionnaire. The results were analyzed, mainly for the reliability and for the internal consistency of the measurement tool. The preliminary version has 26 items. The content and wording of the questions were evaluated by the expert group. The number of items was reduced to 14 by the experts group and to 12 after pre-test administration. Test-retest reliability has been assured ($p < 0.05$) between individuals' scores on two attempts of the test, two weeks apart. The internal consistency of the questionnaire as a whole was satisfying with a Cronbach's alpha of 0.6.

Discussion: The questionnaire assessed in this study proved to be a valid and reliable tool to measure the knowledge on infertility risk factors and treatment. However, the construct validity was not tested and need to be verified by comparing the questionnaire score between subgroups of different levels of knowledge. A wider implementation of the questionnaire will allow us to improve its reliability and to identify the major knowledge gaps that have to be especially considered while developing population education programs.

POSTER 8

Evaluation of Controller Inhalation technique among school-aged children with asthma

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Introduction: Pediatric asthma is a worldwide public health problem and a major concern to health-care system. Assessment of asthma should include the assessment of treatment issues particularly inhaler technique. There is paucity of data on this subject among Tunisian children with asthma. This study was performed to evaluate the inhaler technique among children with asthma in a University hospital.

Methods: This was a descriptive study carried out in the pediatric ward of the University Hospital Center “Farhat Hached” in the center of Tunisia over a period of three months (April-June 2018). All the children with asthma admitted to the hospital during the study period were included. Inhaler technique of different devices were evaluated using adapted checklists designed by experts. Asthma symptoms control were assessed according to GINA guidelines 2018.

Results: Ninety children participated in the study with a mean age of 9.81 ± 2.56 . The mean of asthma duration was 5.28 ± 2.94 . Regarding to asthma symptoms control, 22.2% presented well controlled asthma, and 26.7% had uncontrolled asthma. Reported inhaler devices were Accuhaler, Turbuhaler, Pressurized Metered-Dose Inhalers (pMDI) and Cyclohaler. The medication was auto-administred by children. According to adapted checklists, inhaler technique was correct in 45.6% of cases and incorrect in 54.4%.

Conclusions: More than half of the children in this study misused their inhaler devices. Health care professionals have to understand the importance of repetitive physical demonstration on every patient visit in order to enhance inhaler device technique.

Keywords: inhaler technique, metered-dose inhaler, Diskus inhaler, Turbuhaler inhaler, cyclohaler inhaler.

POSTER 11

Causes and Distributions Under-five Mortality in Alexandria Governorate using the Verbal Autopsy and Social Autopsy Studies (VASA) interviews

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Abstract

3064 deaths were collected; 19 case were excluded as they are living outside the study setting. A total 2966 deaths were included; 645 case relatives respond to the survey. A total 192 relatives refused to respond to the interview, and 143 individual accepted to the interview and after planning for the interview they did not come. The response rate was $645/(143+192+645)= 66\%$.

A total 38.2% of all deaths occurred within the first week of life, 20.1% deaths took-place between the age of 7-28 days. of life. Neonatal mortality represented 58.3% of under-five mortalities. About 31.7% of children died after the age of 28 days and before the first birthday. Infant mortality was 90% of the under-five mortality

Smart VA analysis of the questionnaires revealed that; prematurity, birth asphyxia, acute respiratory asphaxia including pneumonia, neonatal pneumonia is the main killer of the- under-five.

POSTER 12

Prevalence of bullying behavior among middle school students in the region of Monastir, Tunisia

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Background

Youth violence represents a global public health problem. School violence is a subset of youth violence and bullying is one of its forms. This study aimed to estimate the prevalence of bullying behavior among middle-school students in the region of Monastir, Tunisia.

Methods We carried out a cross-sectional study in two middle schools in the region of Monastir from December 2017 to January 2018. The Global School-based Student Health Survey (GSHS) was used. All present students from the two recruited schools were included. Data collection and analysis were performed using the Statistical Package for Social Sciences (SPSS) version 21.0.

Results A total of 802 students were enrolled in the study. Just under half of the study group (44%) reported having been bullied in the past month (48.9% among boys versus 51.1% among girls). Among the respondents, being made fun of with sexual jokes, comments or gestures was the predominant type of bullying (9.1%), followed by being kicked, pushed, shoved or locked indoors (3.6%). Being left out of activities and made fun of because of their body were each reported by 3.5% of the victims. Being made fun of due to their religion and being made fun of regarding their race, nationality or color were less prevalent (2.5% and 1.9% respectively).

Conclusion Bullying requires the attention of schools, parents and communities. It is important to take it seriously and step in quickly. Besides, additional studies are needed to understand the factors associated with school bullying.

POSTER 13

Factors associated with being bullied among middle school students in the region of Monastir, Tunisia

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Background

Violence is a worldwide problem, common to many different countries and schools. Being a victim of school bullying, the most common type of school violence, has been frequently associated with a broad spectrum of behavioral, emotional, and social problems. Thus, this study aimed to analyze the association between being bullied and some individual and familial factors.

Methods

We carried out a cross-sectional study in two middle schools in the region of Monastir between December 2017 and January 2018. Schools were recruited by cluster sampling and all present students were included. The Global School-based Student Health Survey (GSHS) designed in Arabic language and adapted to Tunisian vocabulary was administered for students. Multivariate logistic regression was performed to determine the relationship between being bullied and selected factors relating to risk behavior, mental health and parental involvement.

Results

A total of 802 students were included in the study. Almost 44% reported having been bullied in the past month. In multivariate analysis, physical fight was an independent associated factor with being bullied (OR [CI_{95%}]: 2.04 [1,777-3,255]), p=0.001. Besides, lonely students had nearly 3.38 higher risk of undergoing bullying (OR [CI_{95%}]: 3.38 [2.049-5.578]), p=0.001. Being worried was also an independent factor associated with being bullied (OR [CI_{95%}]: 2,232 [1,449-3,436]), p=0.001.

Conclusion Students who are involved in school bullying should be the goal for prevention programs. Thus, an identification and a comprehension of the associated factors to bullying are necessary to implement targeted interventions.

POSTER 14

Spinal tuberculosis (Pott's disease) at Monastir, Tunisia (North Africa): A 12 years retrospective study (2006-2017)

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Introduction:

Pott's disease (PD) or spinal tuberculosis (TB) is a rare condition of total TB cases. However, it is the most common form of bone TB and the most dangerous form of TB disease. If ignored, Pott's disease might lead to important neurologic complications.

The aim of our study was to describe epidemiological profile, trends and burden of Pott's disease in the region of Monastir, Tunisia among 12 years.

Methods

We performed a retrospective study from 2006 to 2017. TB is a notifiable disease. Data were collected by the Regional Direction of Primary Health Care of Monastir through Epi info system. Prevalence of pott's disease was estimated by the age standardized rate (ASR). Spearman correlation coefficient (r) and linear regression coefficient (the slope (b)) was used to estimate trends. The burden of Pott's disease was estimated with YLDs (years lived with disability). Data were verified and analyzed using IBM SPSS Statistics version 22.0 software.

Results:

From 2006 to 2017, 680 cases of Tuberculosis were notified in the region of Monastir. Extrapulmonary TB represented 57% of all localizations. Among them, 31 cases of Pott's disease were reported representing respectively a rate of 8% and 4.5% of extrapulmonary and all localizations tuberculosis cases. The median age of patients was 50 years [IQR:27-65]. Pott's disease was predominant among females with a sex-ratio =0.55 (p<0.0001). The age standardized ratio was 0.38/100,000 inhabitants. YLD were estimated at 0.12/100,000 inhabitants. Pott's disease trend was stable among years (b=0.104; r=0.3) (p=0.095).

Conclusion:

Pott's disease is a severe problem endangering the public health and cannot be ignored. Most patients ignore its symptoms and are diagnosed late. Thus, surveillance of spinal tuberculosis should be strengthened in order to avoid its complications.

POSTER 15

Current Perception and attitude towards Organ Donation: A Survey of Tunisian students in Health sciences

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Introduction:

The number of donors of human organs in Tunisia remains below requirements, less than 10 per million inhabitants. In 2005 we estimated the percentage of organs transplanted from donors in cerebral death condition around 0.6 per million inhabitants. The health professionals have an important role in the donation process since their attitudes towards becoming an organ donor may also explain this inadequacy.

The aim of this study is to determine the attitude of Tunisian medical science students towards post-mortem organ donation and the factors that influence this attitude.

Material and Methods:

A cross sectional study was conducted among student in health science studying in faculty of medicine of Sousse, the Institute of Nursing Sciences of Sousse and the School of Sciences and Technical Health of Sousse over a period of three months from February to April 2016.

We proceeded to a cluster sampling method based on lists of groups of student enrolled at participating institutions. First we have done a simple random draw among the levels of study then on second time, a simple random draw of the groups from each chosen level; finally the whole chosen group participated in our study.

The collection of data was based on a self-administered questionnaire inspired from the "Questionnaire about organ donation and transplantation", validated in French.

Results:

A total of 742 student participated in our study. Overall, the attitude towards organ donation was favorable among 42.2% of respondents (n = 313). The most important determiners of this attitude were: knowledge of the concept of cerebral death (OR = 1.850 p <10⁻³), discussion of the subject within the family (OR = 0.360 p <10⁻³), participation in prosocial activities (OR = 0.076, p <10⁻³), knowledge of the opinion of religion (OR=0.302, p<10⁻³), acceptance of an autopsy (OR=0.373, p<10⁻³) and attitude of the partner towards this subject (OR=0.392, p=0.031)

Conclusion:

In order to promote organ donation ; significant efforts has to be made in several levels such as education; procedures changes and improvement of legal texts.

POSTER 16

Job satisfaction and work related variables among Tunisian palliative care nurses

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Introduction: The satisfaction of the nursing staff is a primary task of health facility performance which is totally neglected. It is considered as a good precursor to performance and productivity for nurses.

The aim of this study is to evaluate the level of satisfaction of nurses working in palliative care services and to describe the associated factors with this satisfaction.

Material and methods:

A cross-sectional descriptive survey was conducted using the quantitative approach during the months of April, May and June 2018 covering all the medical staff practicing in the palliative care departments of the university hospitals Farhat Hached and Sahloul of Sousse, Fattouma Bourguiba of Monastir and Hedi Chaker of Sfax, who voluntarily agreed to participate in our investigation. The collection of data was based on a self-administered questionnaire with two scales: Maslach burn out inventory test (MBI) and Job Satisfaction Scale (JSS); validated in French.

Results:

A total of 111 nurses were included in the study, representing a participation rate of 74%. The mean age was 37.44 ± 8.45 years with a female predominance equal to 56.8% and a sex ratio male/female equal to 0.76.

The seniority in the profession was 14.25 ± 11.7 years and in the service of 6.33 ± 4.7 years.

According to the Satisfaction Scale, only 36.9% of participants were satisfied with their work. Factors associated with satisfaction were age ($p=0.002$), work environment ($p=0.007$).

According to the MBI Scale, a burnout level was found to be high among 34 nurses (30.6%).

Our study found a statistically significant association between burnout and work environment ($p=0.001$), gender and ($p=0.002$) work environment ($p=0.001$).

Conclusion:

Transformation of working conditions that are harmful to health is necessary. The human dignity of nurses and highlight the factors that prevent nurses from acting must be considered to ensure the satisfaction of nurses.

POSTER 17

Telomere shortening in Myelodysplastic Syndromes

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Introduction

Myelodysplastic syndrome (MDS) is clonal myeloid stem cell disorder characterized by cytopenia. It results from ineffective hematopoiesis and morphologic dysplasia of the hematopoietic cells.

Our knowledge about the genetics of MDS has been dramatically improved during the past decade, in which cytogenetic and revolutionized sequencing technologies have played a major role: chromosomal abnormalities and many genes mutated were identified.

Shortening of telomeres has also been reported in MDS and is associated with MDS evolution.

The aim of our study is to demonstrate telomere shortening in MDS patients using fluorescent in situ hybridization (FISH) technique.

Patients and methods

26 MDS patients and 2 healthy volunteers were included in this study.

Conventional cytogenetic analyses revealed chromosomal abnormalities, and FISH revealed telomere shortening of chromosome 15 using a fluorescent probe for 15q telomere.

We estimated the percentage of shortenings on 200 interphase nuclei for each patient.

Results

The percentage of telomere shortening 15q was 7% in patients and 3% in healthy controls.

By comparing the shortening percentage with the results of conventional cytogenetic, we found a rate of 5.3% in patients with normal karyotype, 8% in patients with deletion 5q, 10% in patients with deletion 12, 2% in patients with monosomy 7 and 7.5% in patients with complex karyotype.

Discussion

The percentage of telomere shortening is higher in patients with chromosomal abnormalities (9.8%) compared to 5.31% in patients with normal karyotype ($p=0.02$).

Our study proves telomere shortening in MDS patients and confirmed that it is associated with cytogenetic abnormalities.

Conclusion

The correlation between chromosomal abnormalities and telomere shortening rates in MDS helps as a useful marker for the assessment of MDS patient's risk, and prevents possible transformation into acute leukemia.

Keywords: Myelodysplastic Syndromes (MDS), Telomere shortening, Fluorescent In Situ Hybridization (FISH)

POSTER 18

Study of knowledge of childcare in primiparous women in the postpartum ward of FARHAT HACHED CHU

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Introduction

post-perfume period is an essential phase of adaptation and change for women who give birth to their first child, because during this period the new mother discovers her baby and vice versa, especially through the basic care offered to this baby . Our research aims to study the knowledge of primiparas in the care of childcare bases.

Material and methods

A cross-sectional descriptive survey was conducted among 50 primiparous women who were hospitalized in the CHU Farhat Hached postpartum department. Our working tool was a questionnaire composed of questions related to women and basic care.

Results

the results showed that a frequency of 29 (57%) primiparas answered correctly on the chapter "Breastfeeding", a frequency of 29 (55%) of new mothers answered correctly on the chapter "care of hygienes ", a frequency of 23% (47%) answered correctly on the chapter" sleep "and finally a frequency of 24 (52%) answered correctly on the chapter" danger signs ".

Conclusion

knowledge has proved to be insufficient, especially since women who have given birth refer to the family circle which is not always credible, against the reference to health professionals, who should be the first source of advice. The primiparous need our help during this period of adaptation to the arrival of the newborn.

POSTER 19

Knowledge and attitudes of pregnant women about tetanus vaccine

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Abstract:

We conducted a quantitative cross-sectional descriptive study to describe the level of knowledge and attitudes of pregnant women about tetanus toxoid vaccine.

to reach our goal, we have recourse to a questionnaire distributed to 50 pregnant women consulting at the maternal and child health center ELHAMMA Gabes.

From this study, we found that:

- * 56% of the target population has no information on antitetanic vaccination.
- * 18% of respondents knew the role of the tetanus vaccine.
- * 84% of women do not send a reminder of antitetanic vaccination after childbirth.
- * 36% of respondents think that the tetanus vaccine can prevent their babies against tetanus.

In light of these results we have noticed that the target population needs more information on tetanus vaccination.

This underlines the importance of the clear explanation of the education and awareness of pregnant women by the medical and paramedical staff, which is very important.

POSTER 20

Psychosexual Impacts of Canceling Medically Assisted Procreation Cycles

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Introduction

The impact of stimulation and medically assisted procreation (ART) techniques is cumbersome and complex physically, psychologically and financially; an unsuccessful attempt is even more cumbersome and complex. The psychological experience of infertility is hard on the patients, and the optimism offered by the stimulation does not seem to protect the distress that follows the cancellation procedures. An impression of having been cheated on the chances of success increases frustration and disappointment.

Objective:

To determine the psychological, emotional and sexual implications of the cancellation of PMA cycles within the infertile couple.

Materials and methods :

This is a descriptive and analytical cross-sectional study conducted over a period of 1 year from January 1st, 2016 to December 31st, 2016 at the Reproductive Medicine Unit of Farhat Hached University Hospital in Sousse. Of the 820 consecutive IVF / ICSI cycles completed during the study period, 99 cycles were canceled. Of these 99 canceled cycles in 88 patients, four were for prevention of hyperstimulation syndrome, while 95 cycles were canceled for poor ovarian response. Given the small number of cycles canceled to prevent hyperstimulation, they were discarded so as not to bias the calculation of averages.

Clinical and biological data were captured and analyzed by SPSS version18.0 software.

Results:

The median age of patients with a cycle cancellation was 37 years with extremes ranging from 26 to 44 years. The majority of cancellations occurred on the 8th day of the stimulation (31.6% of the cancellations), and 16.8% of the canceled cycles were on the 6th day of the stimulation.

As to the impact of this cancellation on the quality of life of the women interviewed as well as that of the couple:

- The disappointment was the feeling expressed by the quasi majority of participants,
- The fear of loss of chances of fatherhood was expressed by 81.05% of the women surveyed (77/95),
- Psychosexual effects were reported:
 - 51.57% (49/95) mentioned a decline in self-confidence,
 - 93.68% (89/95) had a depressed mood,
 - 95.78% (91/95) were anxious,
 - 46.31% (44/95) had sexual problems: decreased desire, disturbed excitement or orgasm.
 - 52.63% (50/95) reported a decrease in pleasure during intercourse.
- Psychological and psychosocial dysfunctions have been observed:
 - All the patients were sensitive to the remarks and questions of the entourage whom they perceived as a true aggression,
 - Some patients (n = 7) used alternative therapies (alternative medicine, herbalism, various natural products, etc.) and / or consulted a diviner (n = 1).
 - A couple had started divorce proceedings.

Conclusion:

There is a negative influence of the cancellation of PMA cycles on the marital and sexual life of the couple. It is necessary to ask questions about these psychosocial repercussions, and it is necessary to be able to count on an interprofessional team with variable composition (gynecologist, psychologist, social assistant, conjugal and family therapist, ...) who must be present (or at least accessible) in the various settings that provide reproductive care.

POSTER 21

Systemic Lupus Erythematosus. What is the role of Cytokines?

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Introduction: Systemic lupus erythematosus (SLE) is the prototype of systemic autoimmune diseases, characterized by the production of antinuclear antibodies. The physiopathology remains very imperfectly known but it involves a combination of environmental, genetic and immunological factors.

The aim of this work is to study the involvement of inflammatory cytokines (IL-1 β , IL-6 and TNF- α , and IL-10) in the pathogenesis of (SLE).

Methods: This is a retrospective case-control study for 30 Tunisian patients with (SLE), followed in the Internal Medicine Department in the Military Hospital of Tunis and 64 healthy volunteers in the same hospital.

The serological assay of IL-1 β , IL-6 and TNF- α was performed by the chemiluminescence technique using IMMULITE1000[®]. The IL-10 assay was performed by the ELISA technique.

Results: The age of onset of the disease was available only in 22 patients with an average age of 36.27 years \pm 16.33 with extremes ranging from 11 years to 70 years. Females were predominant in patients (n =23, 76.7%) compared to males (n =7, 23.3%) with a sex ratio (female to male) of approximately 3:1. Compared to controls, patients with (SLE) had elevated serum concentrations of IL-1 β (Patients =4.99pg / ml, Control = 4.98pg / ml), IL-6 (Patients = 8.61pg / ml, Control = 1.99pg / ml), TNF- α (Patients =17.35 μ g / ml, Controls = 6.69 μ g / ml) and IL-10 (Patients = 8.25 μ g / ml, Controls = 1.12 μ g / ml), (p = 0.001 <0.05). The statistical study has shown that these cytokines are involved in the pathogenesis of lupus.

Conclusion: In our study, patients with (SLE) had elevated serum cytokine concentrations of IL-1 β , IL-6, TNF α , and IL-10 compared to controls, consistent with some published series in the literature. However, the involvement of these cytokines in lupus remains controversial and requires more investigation and further research for better patient management.

POSTER 23

Misconduct in research work ... facts, figures and Minimizing strategies

Dr Hamid yahay Hussain

Introduction: misconduct in research work includes fabrication, falsification, and plagiarism, which is intentional or not, falls short of good ethical and scientific standards. Misconduct is a global problem. Yet few countries have mounted a comprehensive response to misconduct that includes programmes of prevention, investigation, punishment, and correction. **Objectives:** To highlight some facts and figures about research misconduct from different national settings, and to identify some effective minimization strategies.

Methodology: Systematically revising literature, through formulating search question and web search strategy on research misconduct at different search engines for the incidence report along the last 5 years .

Results: About 2%–14% of researcher may have Making up or falsified data, out of which 35%-75% found to be an intentional and planned for behavior. Carrying out” 14 surveys on authorship misuse, almost 55% (95% CIs 45%–64%) in four countries outside the US or UK compared with 23% in the USA or UK (95% CIs 18%–28%). Three of these studies came from LMICs (Low and middle-income countries), South Africa reporting a rate of 64% (95% CIs 44%–81%), India 38% (95% CIs 18%–62%), and Bangladesh 60% (95% CIs 44%–74%). It is not clear that misconducts are commoner in LMICs than in the US or UK, yet misconduct frequently occur in LMICs. Revising 21 surveys in the systematic review and 18 in the meta-analysis revealed that 14% had fabricated or falsified data and nearly three-quarters were guilty of questionable research practices.

Conclusion: misconduct is an alarming and growing up phenomena, it occurs intentionally or UN intentionally where many how to stop strategies can be adopted to prevent and control for the unlimited negative effect can be produced through. **Recommendation:** Promoting culture of integrity, prevention, Developing Policies and guidelines, preliminary assessment, correction, Inquiry, investigation, punishment, are examples of effective strategies for misconduct minimization.

POSTER 24

Blood CD34 Cells Dynamics in Diabetic patients With or Without Cardiovascular Diseases: The Bridge Influence between Nuclear Factors STAT1/6 and PPAR γ/α

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Research on the pathobiology of diabetic complications has always been focused on hyperglycemia and associated metabolic abnormalities. A better understanding of the cellular and molecular network that regulates hematopoietic progenitor cells is likely to boost the development of therapies potentially suitable for diabetic patients; CD34 could be used to follow and analyze the stem dynamic during the immunophysiology pathology stress like the Chronic Diabetic type 2 diseases. At the same time the two classes of transducer nuclear factor are chosen, STATs and PPARs, distinguished by the nature of their ligands and signaling ways. The aim of this work is to study the dynamic of Peripheral Blood Mononuclear Cell (PBMC) –CD34 cells in two groups of type 2 diabetes with or without Cardiovascular Diseases; CD34 mobilization in relation to the couple STAT1/6 and PPAR γ/α expression. PBMCs from 20 patients of each group are harvested by Ficoll density gradient, the expression of CD34, STAT1/6 and PPAR γ/α are detected by the quantitative reverse transcription polymerase chain reaction (q-RTPCR) using a specific primer. We have found a pronounced significantly expression of CD34+ in Diabetic group with Cardiovascular Disease (D.CVD) than Diabetic case (D) with respectively (1,7 \pm 0,9) vs (1,17 \pm 0,06) p<0,05. The D.CVD group stress promote clearly the expression of STAT1 with (0,81 \pm 0,08) vs (0,12 \pm 0,40) for (D) group. This profile is associated with an advantage expression of PPAR α (0,89 \pm 1,37) vs (0,76 \pm 1,62) to gammaPPAR. However in D group patients the nature of stress promote STAT6 expression with (1,04 \pm 0,32) vs(0,35 \pm 0,24) for D.CVD. This situation favorite significantly more PPAR γ expression (2,07 \pm 0,8) against (0,99 \pm 1,06) for PPAR alpha p<0,003. This model also showed a strong significant correlation between STAT 6 and PPAR γ in both D.CVD and D group (r= 0,99 ; r= 0,84) p<0,05) respectively. Otherwise, a significant negative correlation was found between STAT1 and PPAR α expressions in D group (r=-0,75 ; P<0,05).

The stress phenotype marked by the bridge between PPAR γ/α and STAT1/6 demonstrate that CD34 Stem cells value is sensitive and adapt to immunophysiology status linked to its endogen and exogen ligands. Finally our model seems interesting to explore this type of stress situation.

POSTER 29

ORAL health education activity at primary schools

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Introduction :

tooth decay is the most common disease in schools, it affects 3 in 5 students. Teaching a proper oral hygiene early in life can minimize the burden of oral disease in adulthood. school-aged children are particularly susceptible to learning and adopting new habits in life.

The aim of the study was to support the development of oral health education in schools

Methods :

We conducted a descriptive and retrospective study including all reports of oral health education activity conducted at the Manouba, Ben Arous and Ariana schools during the months of October and November 2018 . schools were chosen by random sampling. the data was collected by a questionnaire reporting the organization of this activity

Results :

our study included 51 schools and 152 reports on oral education sessions . a health education program was elaborated for 59% of the all classes . 1st cycle(1st and 2nd level classes) was the most represented level (67%). the rhythmicity of these sessions was quarterly (49%). theoretical information was the most used teaching method(78%) whereas the practical workshop remained the least used method. school nurses and teachers were the two facilitators of these sessions whereas only 39% of the teachers had oral health training.

Conclusion :

Oral health education activity at schools is moderately organized, the transmission of information based mainly on theoretical knowledge rather than practical training, which remains insufficient. the rhythm of these sessions does not favor, in the majority of the cases, the aquisition of an adéquat behavior. a corrective actions should be proposed to update Oral Health Education Program at schools.

POSTER 30

Glycemic control among type 2 diabetes patients in Sousse, Tunisia

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Introduction:

The prevalence of Type 2 diabetes mellitus (T2DM) went up all over the world during the past few decades, and the trend is rising. Diabetes increases the risk of serious health problems including vascular complications. Optimal glycemic control is well known to reduce effectively the risk of both microvascular and macrovascular complications. In Tunisia a national program of diabetes and hypertension management was implemented since 1993. However, it was rarely evaluated.

Objective: To evaluate the glycemic control among patients with T2DM in the region of Sousse.

Methods:

Cross-sectional study was conducted between April and June 2017 among type 2 diabetes patients in 2 ophthalmic outpatient departments in Sousse: in a secondary and a tertiary health care centers. The required number of participants was 340. A pre-tested questionnaire served to collect data by a trained medical doctor. The Morisky scale was used to measure patient's adherence to treatment.

Results:

Response rate was 95.1%. The mean age of participants was 58.7±10.6 years. Females represented 60.4% of participants. Sixty nine patients (20.7%) were treated by Insulin. Glycated hemoglobin was over 7% for 172 (51.7%) patients. Duration of diabetes was over 10 years for 78 (23.4%) patients. Practice of the recommended physical activity was reported by 119 (35.7%) patients. Daily intake of five serving fruits and vegetables was reported by 143 (42.9%) patients. Excess of weight was observed among 220 (66.1%) patients. Adherence to treatment was low among 91 (27.3%) patients and medium among 229 (68.8%) patients. Lack of practice of the recommended physical activity, lack of fruits and vegetables intake, duration of diabetes over 10 years, treatment by insulin and low adherence to treatment were significantly associated with poor glycemic control. After multivariate analysis, only duration over 10 years and treatment by insulin remained as predictors of poor glycemic control with adjusted ratios of 7.1 CI_{95%} [2.7-18.8] and 6.0 CI_{95%} [2.0-17.9] respectively.

Conclusion:

Glycemic control is poor among patients with type 2 diabetes in the region of Sousse. Patient education should be enhanced with emphasis on patient-doctor communication especially among those with diabetes duration over 10 years and those treated by insulin.

POSTER 32

Analysis of sperm nuclear structure and screening for SUN5 gene mutation in infertile patients with “Pinhead sperm” syndrome

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ABSTRACT:

“Pinhead sperm” or “acephalic sperm” syndrome is a rare but severe form of human teratozoospermia, refers to the condition in which ejaculate contains mostly sperm flagella without heads. Ultrastructural studies of acephalic spermatozoa suggest that this condition results from defects information of the connecting piece of spermatozoa during late spermiogenesis. The familial incidence and the typical phenotype strongly suggest the genetic origin of the syndrome. Recent studies (Zhu et al., 2016; Elkhatib et al., 2017; Shang et al., 2018) have found many mutations in SUN5 gene involved with this syndrome. The aim of this study was to analyze sperm nuclear integrity and genetic alterations in SUN5 in patients with “Pinhead sperm” syndrome.

This is a case control study carried out on 5 Tunisian infertile patients with “Pinhead sperm” syndrome and 25 fertile men with normal semen profiles included as a control group. Semen samples were analyzed according to the World Health Organization criteria (2010). Chromatin condensation was assessed by aniline-blue Staining. Sperm DNA fragmentation was evaluated by terminal desoxynucleotidyl transferase mediated deoxyuridine triphosphate biotin nick-end labelling (TUNEL) assay and chromosome abnormalities by fluorescence in situ hybridization (FISH) for chromosomes X, Y and 18. We performed PCRs and Sanger sequencing for mutations screening of SUN5 associated to “Pinhead sperm” syndrome.

Sperm analysis showed numerous isolated motile tails and fewer isolated heads. The mean DNA fragmentation index was significantly higher in patients compared to the controls ($35 \pm 6.21\%$ vs $10.41 \pm 3.77\%$). The aniline blue-reacted spermatozoa rate was also high in comparison to the controls ($63.66 \pm 6.027\%$ vs $11.80 \pm 5.7\%$). The rate of total sperm aneuploidy was higher in patients compared to the controls ($3.74 \pm 0.68\%$ vs $1.48 \pm 0.22\%$) with a predominance of sex chromosomes disomy. For the molecular analysis, SUN5 gene showed no mutation in exons 2,3, 4, 5, 7, 8, 9, 10 and 11 for our patients.

Infertile men with “Pinhead sperm” have an impaired nuclear sperm which obviously affects the fertilizing sperm power. There is no mutation in screening of SUN5 gene which suggests that Pinhead sperm is a multigenic disease and that’s why we plan to complete the mutational research important for genetic counseling before assisted reproductive technology (ART).

Keywords: Pinhead spermatozoa, DNA fragmentation, chromatin condensation, sperm aneuploidy, SUN5 gene

POSTER 33

Biological, cytogenetic and molecular analysis of Tunisian patient with MMAF syndrome (Multiple Morphological Abnormalities of the sperm Flagella)

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ABSTRACT:

MMAF syndrome is a rare but severe form of teratozoospermia defined by the presence in the ejaculate of immotile spermatozoa with several abnormalities of the sperm flagellum including short, coiled, absent and flagella of irregular caliber. Mutations in DNAH1, an axonemal inner dynein arm heavy chain gene, have been shown to be responsible in 28% of MMAF patients (Ben Khelifa et al.,2014).The aim of this study was to analyze sperm nuclear integrity and genetic alterations in DNAH1 in patients with MMAF syndrome.

This is a case control study carried out on 52 Tunisian infertile patients with MMAF syndrome and 25 fertile men included as a control group. Semen samples were analyzed according to the World Health Organization criteria (2010). Sperm DNA fragmentation was evaluated by terminal desoxynucleotidyl transferase mediated deoxyuridine triphosphate biotin nick-end labelling (TUNEL) assay. Chromatin condensation was assessed by aniline-blue Staining. Fluorescence in situ hybridization for chromosomes X, Y and 18 was performed to study the chromosomal meiotic segregation. We performed PCRs and Sanger sequencing for mutations screening of DNAH1.

Semen morphology analysis shows a mosaic of multiple morphological abnormalities of the flagella with an average rate of 46.73% short tail, 16.22% bent flagella, 22.07% coiled tail and 10.90% absent flagella which describe a MMAF syndrome. We also showed a high percentage of microcephalic heads (37%) and acrosome abnormalities (42.75%). The mean DNA fragmentation index (DFI) was significantly higher in patients compared to controls ($p < 0.05$). The results of aneuploidy frequencies showed a significant difference between both groups ($p < 0.05$) predominant in the mean disomy rate of sex chromosomes ($p < 0.05$). Whereas, the difference was not significant for the rate of aniline blue-reacted spermatozoa in patients compared to the control group ($p > 0.05$). For the molecular analysis, DNAH1 gene showed no mutation in exon 23, 31, 74 and 78 for our patients.

In these cases, we have demonstrated impaired sperm nuclear quality, which will affect the results in ART. There is no mutation in screening of DNAH1 gene that's why we plan to complete the mutational research important for genetic counseling before ART.

Keywords: Male infertility, MMAF syndrome, DNA fragmentation, chromatin condensation, sperm aneuploidy, DNAH1 gene.

POSTER 34

Trends of contraception means used in Tunisia

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Introduction

Tunisia is a precursor country in terms of contraception with contraceptive products being legally sold since 1961. A progress in contraceptive prevalence was then reached with a total fertility rate decreasing from 7.2 in 1966 to 2.2 in 2015.

Our goal was to analyze the trends of the contraceptive means use in Tunisia.

Methods

This was a cross-comparative study, based on data from three national surveys on maternal and child health: the MICS2 in 2000, the MICS3 in 2006 and the MICS4 in 2011-2012. We analyzed the trends in CP between 2000 and 2012.

For cultural reasons, only married women of reproductive age (15 to 49 years) were included.

Results

Regardless of their geographic origin or their place of residence, women mainly used modern methods (86.6% in 2000, 50% in 2012). The intrauterine device was undoubtedly the first method chosen (48.3% in 2000 versus 25.3% in 2012), with less use of this method among younger women (15-24 years); followed by the pill, the use of which increased significantly (16.8% in 2000 vs. 19% in 2012; $p < 10^{-3}$) and is the most use means among young women. These latter were also more likely to use male condoms. Moreover, the recourse to tubal ligation decreased significantly (16.9% in 2000 vs. 3.1% in 2012; $p < 10^{-3}$). However, a renewed interest has been observed for traditional methods (12.7% in 2000 vs. 27.18% in 2012; $p < 10^{-3}$).

Conclusion

In Tunisia, contraceptive methods are used differently by age, geographic origin and the place of residence. The change of women's lifestyle resulted in more recourse to natural methods. Thus, it is important to better target awareness campaigns, to preserve and strengthen political achievements and customize medical follow-up.

POSTER 35

Contraceptive prevalence and social determinants of contraceptive use in Tunisia

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Introduction

Thanks to its pioneering family planning strategy, Tunisia was able to achieve real progress in contraceptive prevalence (CP).

Our objective was to study the evolution of CP in Tunisia and its key social determinants.

Methods

This was a cross-comparative study, based on data from three national surveys on maternal and child health: the MICS2 in 2000, the MICS3 in 2006 and the MICS4 in 2011-2012. We analyzed the trends in CP between 2000 and 2012.

For cultural reasons, only married women of reproductive age (15 to 49 years) were included.

Results

The CP observed was overall high, despite having decreased and then recovered from 65.5% to 60.2% between 2000 and 2006, then from 60.2% to 62.5%.

By groups of age, increase in CP was only noted in the group of 45-49 years old, whereas other age groups, especially those under 30 decreased their CP.

CP also decreased among women residing in the Northeast [72% in 2000 vs. 59.6% in 2012; $p < 10^{-3}$], the Central East [68.7% in 2000 versus 61.2% in 2012; $p < 10^{-3}$] and the Southwest [64.6% in 2000 versus 57.9% in 2012; $p < 10^{-3}$].

Women with higher education had a significant decrease of their CP [66.3% in 2000 versus 57.8% in 2012; $p < 10^{-3}$].

Conclusion

Studying the evolution of CP between 2000 and 2012 in Tunisia, we found that women aged 35 to 39, living in urban areas and having a high level of education had the highest CP, with obvious regional disparities. New intervention strategies, need therefore to focus more on populations with weaker CPs and to enhance access to family planning structures.

POSTER 36

Study of postpartum depression risk factors in women delivered at the obstetric gynecology ward of CHU farhat hached de sousse

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Introduction:

PPD is a woman's condition in the postnatal period. The lack of knowledge concerns the signs and risk factors of this pathology may lead to a lack or under diagnosis. For this reason, we have chosen to study the frequency of risk factors associated with PPD in women delivered at the postpartum ward of CHU Farhat Hached Sousse.

Material and methods :

To meet our work objectives we used an anonymous questionnaire comprising 27 questions addressed to a sample of 100 women delivered at the obstetrics and gynecology department of CHU Farhat Hached de Sousse. The collected data was entered and the results were analyzed by the Microsoft Office Excel Software.

Results:

The average age of the population is between 18 and 40 years old. It was found that the incidence of illiterate women was 13% and that of the higher level was 22%.

It has been noted that a frequency of 41% of women live far from their families, while a frequency of 59% of women live in the same city as their families. According to our results, 92% of women said they had a good marital relationship and 8% said they had a bad marital relationship. It was found that the frequency of women who reported having a personal history of psychological disorders was 19%. The multiparous women who had disorders of the psychological state are in number of 15 (22.7%). 10.6% of women have perinatal infant deaths and 3% have children with disabilities.

The majority of the women surveyed wanted to have a pregnancy with a frequency of 71% against 29% who did not want it. The frequency of women who have a feeling of depression during pregnancy was 30% and a frequency of 70% for those who did not feel this way.

The frequency of women who felt an accumulation of responsibilities without being able to do so was 34%. The frequency of suicidal thoughts is 7%.

Conclusion:

PPD is a real public health problem not only because of its frequency, but also because of its adverse effects on the emotional and cognitive development of the baby, on the mother, and even on family relationships. Hence the need for its prevention by identifying women at risk and appropriate care.

POSTER 37

Pregnancy and childbirth at age 40 and over: epidemiological-clinical aspect of 326 cases

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Introduction :

Numerous sociological, demographic and medical factors led to an increase in the frequency of pregnancies after the age of 40 in recent years. Nevertheless, these late pregnancies are at the origin of maternal-fetal morbidity and mortality.

The aim of our work is to specify the epidemiological profile of these late pregnancies, to study the course of pregnancy and childbirth as well as the maternal-fetal prognosis of these advanced pregnancies.

Material and methods :

A descriptive retrospective study over a period of one year carried out at a 3rd level maternity ward during which we collected 326 mothers aged 40 and over.

Results:

The frequency of pregnancies at age 40 and over is 4.56%; the average age was 42 years with extremes of 40 and 51 years. 17.48% are primiparous against 36.19% of multiparas. A pathological medical history was found in 22.8% of cases; particularly chronic hypertension (7.67%) and diabetes (4.9%). Gynecological antecedents were dominated by spontaneous abortions (36.5%).

Pregnancy was induced in 4.6% of cases. Amniocentesis was performed in 17.48% of cases. A chromosomal abnormality was diagnosed in 1.22% of cases. The gravid diseases were dominated by gestational diabetes (11.65%) and hypertensive pathology (11.96%).

28.01% of patients had an abnormal work and 6.7% required instrumental extraction, a cesarean was performed in 26.25% of cases including 45.23% of cesarean prophylactic, the indications were dominated by the uterus scar tissue, against 54.76% of caesarean section 2nd intention and the main indication was the SFA.

5.93% of parturients had a delivery complication dominated by postpartum haemorrhage (2.81%).

In addition, we deplore a maternal death in a table of severe toxemia of pregnancy. At the fetal level, we recorded 15.35% fetal hypotrophy, 12.95% macrosomia, 15.36% prematurity, 5.42% congenital malformations and 4.52% neonatal mortality.

Conclusion: All data confirm the high-risk character of these late pregnancies, hence the need for close and rigorous prenatal follow-up, while emphasizing the importance of antenatal diagnosis.

POSTER 39

Pregnancy management in maternal thrombopenia: a prospective assessment of diagnostic and therapeutic management in university hospital farhat hached, sousse

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Backgrounds:

Thrombocytopenia occurs rarely during pregnancy, and may result from diverse etiologies. Awareness of these many causes facilitates proper diagnosis and management of thrombocytopenia in the pregnant setting. Some causes of thrombocytopenia are unique to pregnancy and may have a can have serious consequences on the health of the mother and newborn

The aim of this study is to evaluate the various etiologies of thrombocytopenia encountered among patients hospitalized at the maternity center of Farhat Hached Teaching Hospital of Sousse and their maternal-fetal repercussions

Material and methods:

A prospective, descriptive study was conducted at the Maternity Center of the Farhat Hached Hospital of Sousse in collaboration with the Hematology and Neonatology Departmentl, over a period of one year. We included pregnant women who had a platelet count $<150 \times 10^9$ platelets / L during pregnancy and who gave birth at our center. An anamnesis, a clinical examination and an exhaustive biological assessment were carried out for all the patients. The maternal surveillance was continued post partum on Day 1, day 3, 1 month and 3 months.

Results:

A total of 71 patients participated in our study.

The etiologies were dominated by gestational thrombocytopenia (42.3% of cases) followed by idiopathic immunological thrombocytopenic purpura (31% of cases) .

A total of 13 patients with idiopathic thrombocytopenic purpura were treated using Corticosteroid therapy .this protocol was successful only for six cases.

Eleven patients in the Idiopathic Immune Thrombocytopenic Purpura group received polyvalent immunoglobulin without success in four cases.

The mean term of delivery was 37.5 (\pm 2.6) SA. 74.64% of patients delivered vaginally. At three months postpartum, thrombocytopenia persisted for 40.8% of patients. Seven neonates (10.14%) had thrombocytopenia at birth, three of them presented major thrombocytopenia.

CONCLUSION:

The low prevalence of thrombocytopenia during pregnancy in our series may reflect insufficient and limited screening. Therefore a better screening system must be established in order to prevent eventual complications and to establish a multidisciplinary codified management at the light of new knowledge and adapted to the means and resources of our country.

POSTER 40

The simple rules of IOTA classification

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Introduction:

The Simple Rules are a preoperative classification system for ovarian tumors, consisting of five features typical for benign tumors (B-features) and five features typical for malignant tumors (M-features). The Simple Rules can be used to diagnose ovarian cancer in women who have at least one persistent adnexal (ovarian, para-ovarian, and tubal) tumor and are considered to require surgery. Based on which of the B- and M-features that apply, tumors are classified as Benign, Malignant or Inconclusive.

Goals:

The aim of our study is to evaluate the performance of the IOTA classification in discriminating between malignant or benign ovarian tumors.

Material and methods:

This is a prospective study of 150 patients carrying an ovarian mass diagnosed by pelvic ultrasound at the hospital farhat hached in the obstetrics and gynecology department between 2019 and 2020.

The ovarian masses are classified as benign or malignant according to the IOTA classification:

- Benign - Only B-features apply
- Malignant - Only M-features apply
- Inconclusive - no features apply, or both B- and M-features apply

Patients will later benefit from surgical exploration and anathomopathological examination of their ovarian masses.

We will then compare the echographic data of these patients with the hystological data.

POSTER 41

Study of vitamin status (vit B9, vitB12) and iron in pregnant women

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Introduction :

Vitamins are the organic compounds required by the human body and are considered as vital nutrients needed in specific amounts. They cannot be synthesized in a sufficient amount by the human body; so, they must be obtained from the diet.

Pregnant women are at risk of multiple micronutrient deficiencies, and indicators of low vitamin B-12, vit B9 and iron status have been associated with adverse pregnancy outcomes, including anemia, low birth weight, and intrauterine growth retardation.

Objective:

The objective of our study is to determine the vitamin B12, B9 and iron status of pregnant women and to consider evidence linking maternal vitamin status during pregnancy with maternal, fetal, and postnatal outcomes.

Material and methods:

This is a prospective study conducted at the maternity center and neonatology of CHU Farhat Hached includes 40 pregnant women, during one year 2019-2020 .

Biochemical screening of vitamin status was carried out at the first trimester of pregnancy and the third trimester , vitamin B12, B9 and iron status status was rechecked at delivery with maternal, fetal, and postnatal outcomes.

Very high prevalence of Vitamin D deficiency was reported in Tunisian mothers (98%) and their newborns (97%) with severe deficiency in most cases Very high prevalence of Vitamin D deficiency was reported in Tunisian mothers (98%) and their newborns (97%) with severe deficiency in most cases Very high prevalence of Vitamin D deficiency was reported in Tunisian mothers (98%) and their newborns (97%) with severe deficiency in most cases

Conclusion

Vitamin D deficiency is prevalent in Tunisian pregnant women and was reported to be associated with adverse outcomes in mothers and their newborns. We hope for soon Tunisian recommendations of Vitamin D supplementation during pregnancy Vitamin B12, B9 and iron status deficiency is associated with adverse maternal and neonatal outcomes, including developmental anomalies, spontaneous abortions, preeclampsia, and low birth weight (<2500 g).

POSTER 42

Study of vitamin D status in Tunisian pregnant women

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Introduction :

Vitamin D has an increasingly recognised repertoire of nonclassical actions, such as promoting insulin action and secretion, immune modulation and lung development. It therefore has the potential to influence many factors in the developing fetus.

Low vitamin D concentrations have been associated with a wide range of adverse maternal and offspring health outcomes in observational epidemiological studies.

Objective:

The objective of our study is to determine the vitamin D status of pregnant women and to consider evidence linking maternal vitamin D status during pregnancy with maternal, fetal, and postnatal outcomes.

Material and methods:

This is a prospective study conducted at the maternity center and neonatology of CHU Farhat includes 40 pregnant women, during one year 2019-2020 .

Biochemical screening of vitamin D status was carried out at the first trimester of pregnancy and the third trimester , vitamin D status was rechecked at delivery with maternal, fetal, and postnatal outcomes.

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Conclusion

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POSTER 43

SCREENING FROM PRE-ÉCLAMPSIE TO FIRST QUARTER OF PREGNANCY: STUDY PRELIMINARY ABOUT 92 CASES.

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Introduction:

Pre-eclampsia is a common pathology in the world and in Tunisia She sees herself at the young primipara's house. The diagnosis is most often fortuitous during the admission of the woman in labor, testifying to the bad management of pregnancy in the underprivileged population. The most common complications are retro-placental hematoma, eclampsia and fetal death in utero. Eclampsia is common and complications are serious, possibly fatal. A strategy for predicting this attack was the goal of our study.

Material and methods:

This is a prospective cohort study conducted at the maternity center and neonatology of CHU Farhat Hached of Sousse over a period of 8 months from December 2015 to June 2016. The purpose of this study was to develop a model for predicting PE during the first trimester of pregnancy.

Results:

92 patients participated in this study. 4 patients were predicted to develop PE.

→ Meaningful association between IMC, personal history of PE and predisposition to pre-eclampsia.

→ The study of biological and Doppler parameters does not show a association between these parameters and the subsequent occurrence of PE.

→ There was a significant association between blood pressure and the occurrence of PE.

→ The workforce, the dosing methods and the software used for the calculation were different from those proposed in the literature.

The clinical predictive model associating the following parameters: age, diabetes, hypertension, personal history of PE and family history PE, BMI, autoimmune disease has an AUC = 0.932.

→ By studying the performance of predictive models we found that the model associating clinical parameters to the PLGF assay is the more efficient model followed PLGF and PAM with a non-significant difference between the two models.

→ The study of parameters 3 to 3 found that the model associating PAPP, PLGF and clinic, is even more efficient with an area under the curve of 0.986.

→ The study of the 4 by 4 parameters showed that all the models are performance, and are far from the random, 3 models have occupied an identical area between them with a difference no significant between:

- Clinic, IPM, PAM and PLGF.
- Clinic, IPM, PAPP and PLGF.
- Clinic, WFP, PAPP and PLGF.

→ In representing the predictive models combined, we found that the difference is not statistically significant. And that La clinical combination and PLGF was present in all combinations.

Thus the clinical association + PLGF is as sensitive as the general model, so, it can be offered for pre-eclampsia screening in our where our health system lacks resources.

Conclusion:

The application of a universal model would be standardizing good practice thus screening for this condition at an early age and with a cost reasonable using a model combining the clinic and the PLGF assay.

POSTER 44

Delivery of twin pregnancy and materno-fetal prognosis in a level 3 Tunisian university center: A retrospective study about 399 cases

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Background and aims:

The frequency of twin pregnancies has increased significantly in recent years as a result of the increasing use of medically assisted procreation techniques.

Despite obstetric and pediatric progress, twin pregnancies still represents a high-risk situation for both pregnancy and childbirth, and is still a distressing situation for the obstetrical team, hence the need for special medical surveillance in specialized structures

The aim of this study was to analyze the practice of delivery of twin pregnancies in the department of Gynecology and Obstetrics of Sousse, to assess the maternal and fetal prognosis and to analyze the factors that can influence it.

Materials and methods:

This is a descriptive, retrospective study of deliveries of twin pregnancies recorded over a two-year period. The study included twin pregnancies with at least 28 weeks of amenorrhea and cases of twin pregnancies complicated by fetal death in-utero.

We collected the epidemiological characteristics of participants, the medical, surgical and maternal obstetrical history, the characteristics of twin pregnancy, maternal and neonatal complications during childbirth.

The collected data was captured and analyzed using the Epi-Info 6 software.

Results:

A total of 399 cases were included.

Bi-amniotic bi-chorionic pregnancies accounted for 67% of cases, compared with only 11.5% bi-amniotic mono-chorionic pregnancies and 3% mono-amniotic mono-chorionic pregnancy.

A total of 178 patients gave birth vaginally (44.6%), and 215 delivered by the cesarean section (53.9%). We counted 52 scheduled cesarean sections. The Labor was spontaneous in 304 cases; labor was induced in 43 cases.

The caesarean section rate for the second twin was 1.5%. We observed 19 cases of complications in vaginal delivery (10.7%). We analyzed the Apgar score of the first twin and the second twin according to the mode of delivery. There was no statistically significant difference in the Apgar score between the two delivery routes.

Conclusion:

The delivery of twin pregnancies is a significant risk factor for maternal and perinatal morbidity and mortality compared to single pregnancies. Perinatal morbidity and mortality is even more important for the second twin than for the first twin. In our study, maternal morbidity in case of vaginal delivery was greater than the morbidity in case of cesarean delivery.

POSTER 45

Clinical and biological aspects of azoospermia in infertile men in Tunisia

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Introduction:

Azoospermia is found in 10-20% of patients consulting for infertility. It may be secretory or excretory azoospermia. The distinction is based on a bundle of clinical, spermiological, hormonal, ultrasonographic, genetic and histological data. Azoospermia is the main indication for testicular biopsy. The histological study of spermatogenesis completes the diagnosis of infertility.

Goals:

To report the clinico-biological and etiological aspects of azoospermia in infertile men in the Reproductive Medicine Unit at CHU Farhat Hached Sousse. Look for preoperative hormonal and clinical factors to predict the success of surgical sampling.

Material and methods:

This is a retrospective study involving 96 patients treated in the reproduction unit of Farhat Hached Sousse University Hospital between January 2014 and December 2016 in the context of an azoospermia and having undergone a testicular biopsy. Patients with obstruction of the seminal tract are distributed in the AO. Patients with spermatogenic disorder are divided into the ANO group according to the results of the testicular biopsy.

Group 1: ANO patients with positive testicular biopsy.

Group 2: ANO patients with negative testicular biopsy.

Results:

The average age of our patients is 38 years old. The age group between 30 and 39 years is the most provided (55.2%) with a sperm extraction rate of 30.2%. In all cases, the infertility is primary type and an average duration of about four and a half years.

The andrological examination noted the presence of testicular hypotrophy in 31.3% of patients and testicular atrophy in 8.3% of patients. Varicocele was found in 19.8% of patients.

The analysis of hormonal balance data mainly concerns FSH and inhibin B. The serum FSH level is high in 63.6% of patients. The mean level of FSH was significantly higher in group 2 than in group 1 (respectively 19.75 IU / L versus 13.57 IU / L, p-value <0.001). The average level of inhibin B was significantly lower in group 2 compared to group 1 (respectively 28.34 ng / L versus 71.04 ng / L, p <0.001).

The distribution of the serum level of inhibin B shows that the best threshold value for predicting the success of sperm collection is 35 µg / ml, with a sensitivity of 75% and a specificity of 80%.

The average testicular volume is 15.42 ml in patients with ANO. The mean testicular volume was significantly lower in group 2 than in group 1 (9.25ml versus 15.17ml respectively, p <0.001). A positive correlation is observed between testicular volume, serum inhibin B and positivity of sperm collection, whereas there is a negative correlation between testicular volume and FSH. A karyotype is performed in 79.7% of patients with ANO. Eight karyotypes favor the klinefelter syndrome. One case of microdeletion of the three AZF regions of the long arm of the Y chromosome is found in our study. The mutation research of the CFTR gene is performed in 12 patients with OA. Two cases of mutation of the CFTR gene are found to be 2.1%. Testicular biopsy is performed in all patients. The sperm search is positive in all AO cases and in 46.4% of ANO cases.

Conclusion:

Azoospermia affects about 10% of infertile men. Its origin is essentially secretory and several etiologies may be involved, including genetic anomalies, number or structure. In this study, we have shown that genetic anomalies represent an important etiological group, which with the development of MPA techniques poses the problem of the possible transmission of these anomalies to the offspring. The management of azoospermia has evolved over the past ten years through two innovations: testicular biopsy and ICSI. Finding a reliable prognostic marker of spermatogenesis (even residual) could facilitate the decision of the biopsy. In patients with ANO, FSH, inhibin B, and testicular volume appeared to correlate well with the outcome of the biopsy. A threshold value of inhibin B greater than 35 pg / ml predicted the presence of spermatozoa during TESE with a sensitivity of 75% and a specificity of 80%. Other correlations described between the level of inhibin B and certain clinical parameters (testicular volume) and hormonal parameters (FSH) were confirmed.

POSTER 46

Obesity and mental health issues among adolescents, Sousse Tunisia 2017

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Background:

The obesity is nowadays a pandemic issue. It is increasing in youths at startling rate. During adolescence young people witness physical changes and experience an upsurge of mental health problem. Little is known about the relationship between mental health and childhood obesity.

Aim:

Therefore, the purpose of this study was to examine the association between weight excess and mental health issues among adolescents in Sousse Tunisia 2017.

Methods:

We conducted a cross-sectional study during 2017-2018 school year, based on a stratified, random cluster sample of secondary school students, in the urban area of the governorate of Sousse, Tunisia. Data were obtained from student's self-administrated questionnaire and anthropometric measurements. Participants were classified overweight or obese based on the Body Mass Index (BMI) cut-points following the International Obesity Task Force (IOTF) references. Mental health was assessed by different scale contained in the questionnaire: Self-esteem measured by Rosenberg Self-esteem Scale (RSE), depression by the Arabic version Beck Depression Inventory-II scale (BDI-II scale), emotional self-awareness by the twenty-item Toronto Alexithymia Scale, anxiety disorder by the Screen for Child Anxiety Related Disorders (SCARED-C).

Results:

The prevalence of overweight was 20,4%;(IC95%:[18,3%–22,3%]) and of obesity was 7%;(IC95%:[5,6%–8,4%]). Compared to their normal weight peer, those with overweight or obesity reported low self-esteem (38,4% vs 35,5%), depressive symptoms (46,2% vs 42,1%), anxiety(54,3% vs 46,3%) and lack of emotional self-awareness/possible alexithymia (28,5% vs 23,0%) more often. However, the results showed only a significant correlation between anxiety(OR=1,57, IC95%:(1,2;2,1)p=0,006), alexithymia(OR=1,53, IC95%:(1,1;2,1)p=0,036) and overweight/obesity.

Conclusion:

Our results suggest that Tunisian adolescents are not spared from the epidemic of obesity. Overweight was significantly associated with some issues of mental health such as anxiety and alexithymia. Our findings highlight the need for multifactorial approaches when addressing the growing problem of obesity. Mental health should be considered in the future prevention programs that address healthy weight development.

POSTER 47

Outcomes of pediatric cancer in the Center of Tunisia

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ABSTRACT:

Pediatric cancer represents only 1% of cancer. Although cancer in children is rare, it is the leading cause of death by disease past infancy with 300 000 deaths per year. This study aims to describe particularity of pediatric cancer in the center of Tunisia and treatment outcomes.

This is a retrospective study about patients aged under 16 years treated for an histological proven cancer between 1994 and 2017 in the department of medical oncology of Farhat Hached University hospital, Sousse (Tunisia). The statistical analysis was made with SPSS19.0

Four hundred and eighty nine patients were studied with a median age of 4 years (1 months- 15 years) and a sex ratio of 0.98. The distribution of cancer in this study was Nephroblastoma (17.5%), Neuroblastoma (14%), mesenchymatous tumors (17.1%), bone cancers (10.8%), Burkitt lymphoma (9%), brain tumors (9%), germ cell tumor (7.3%), nasopharyngeal tumor (4.5%), retinoblastoma (4.5%) and hepatoblastoma (1.8%). The most common types of cancer in patients aged under 2 years were: Neuroblastoma (31%), nephroblastoma (7%) and germ cell tumors (13.8%), in patients aged between 2 and 5 years: Neuroblastoma (25%), Nephroblastoma (17.5%) and Rhabdomyosarcoma (RMS) (17.5%), in patients aged between 5 and 10 years: Nephroblastoma (17.9%), RMS, Ewing sarcoma and Burkitt lymphoma 14.3% each, in patient aged more than 10 years: nasopharyngeal carcinoma (28.6%), osteosarcoma (14.3%) and germ cell tumors (14.3%). Cancer was localized, locally advanced or metastatic in respectively in 18.9%, 55.9% and 25.2%. causes were not described. Median overall survival (OS) in this study was 65% with disparities depending on cancer type such Burkitt lymphoma, Nephroblastoma, neuroblastoma, rhabdomyosarcoma, ewing sarcoma, medulloblastoma with respectively: 89.1%, 75%, 53%; 41%, 58%, 70%.

Pediatric cancer management is still challenging for molecular diagnosis, etiology and especially in our country for the locally advanced and metastatic disease due to consultation delay and the limited access to intensive treatment tools. NCI supports a broad range of research to better understand the causes, biology, and patterns of childhood cancers and to identify the best ways to successfully treat children with cancer.

POSTER 48

Rhabdomyosarcoma in Children: Clinical and Therapeutic Characteristics in the Tunisian Center about 32 cases

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Background/purpose:

Rhabdomyosarcoma (RMS) is a heterogeneous disease with variable survival rates depending on the primary site, tumor size and histological type.

The purpose of this work was to study the clinical characteristics of our population and to evaluate our therapeutic results.

Patients and methods:

A retrospective study was conducted on 32 RMS patients treated at the medical oncology department of CHU Farhat Hached from January 2002 to December 2017 according to RMS95 and RMS2005. Array-comparative genomic hybridization (aCGH) was performed on genomic DNA and results confirmed by fluorescence in-situ hybridization on blood and tumor samples. The data analysis was carried out using the SPSSTM 19.0 software package and survival curve established according to Kaplan-Meier.

Results:

The average age was 5 years (1-14 years) with a male/female sex ratio of 1.66. The most frequent localization was in the head and neck (31%) followed by the limbs (18.8% cases) and the retroperitoneal (15.6% cases). Five patients (5.6%) were metastatic at the time of diagnosis. Embryonic RMS was the most common histologic subtype (80%). Genomic rearrangements were discovered by aCGH in one patient.

Eleven patients had a primary surgery that was of type R0 in 6 cases, R1 in 3 cases and R2 in 2 cases. Eleven received adjuvant radiotherapy and six received adjuvant chemotherapy.

Fifty three patients received neoadjuvant chemotherapy with objective response in 76%. The secondary resection rate was 70%. Recurrence was noted in 28% of cases with a median time of 5 months.

The 5-year overall survival rate was 41%. Two third of metastatic patients died within a median survival of 6 months.

Conclusion:

The multidisciplinary management of RMS, the most common soft tissue sarcoma in children, needs more challenge for metastatic forms in limited resources countries.

POSTER 49

Hypertension and associated risk factors among adolescents in Tunisia

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Background: The prevalence of high blood pressure (HBP) among adolescents is increasing in Africa. However, in Tunisia, its extent among adolescents remains poorly documented. Hence the interest of our study was to estimate the prevalence of hypertension and to identify associated risk factors in adolescents in Sousse.

Methods: This is a cross-sectional study of a sample of students in the governorate of Sousse, Tunisia, over a period of two months in 2018. For all participants, we collected anthropometric data and assessed their habits as well as we measured their blood pressure (BP). HTA was defined as systolic BP (PAS) \geq 140 mmHg or diastolic BP \geq 90 mmHg.

Results: In total, 1399 participants were collected. A female predominance was noted (60.5%). The mean age was 17.02 ± 1.51 years old. The prevalences of hypertension, overweight / obesity, smoking, physical inactivity, alcohol consumption and fruit / vegetables were respectively 15.3%, 27.4%, 29.5%, 58%, 9.4% and 33.1%. In multivariate analysis, obesity was independently associated with hypertension (OR = 1.10, 95% CI = [1.07 - 1.14], $p < 10^{-3}$). However, depression as well as Facebook's high addiction score were not associated with an added risk of hypertension (OR = 0.62 / $p = 0.008$ and OR = 0.96 / $p = 0.021$ respectively).

Conclusion: This study reveals a high prevalence of hypertension among Tunisian adolescents, favored mainly by obesity. Our results highlight the need to implement preventive measures targeting habitual life and HBP screening among young Tunisians both in school and at home.

POSTER 50

Mutations in lectin complement pathway genes COLEC11 and MASP1 cause 3MC syndrome. A novel paradigm in immunogenetics.

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ABSTRACT:

3MC syndrome has been proposed as a unifying term encompassing the overlapping Carnevale, Mingarelli, Malpuech and Michels syndromes. These rare autosomal recessive disorders exhibit a spectrum of developmental features, including characteristic facial dysmorphism, cleft lip and/or palate, craniosynostosis, learning disability and genital, limb and vesicorenal anomalies. Here we studied eleven families with 3MC syndrome and identified two mutated genes, COLEC11 and MASP1, both of which encode proteins in the lectin complement pathway (collectin kidney 1 (CL-K1) and MASP-1 and MASP-3, respectively). CL-K1 is highly expressed in embryonic murine craniofacial cartilage, heart, bronchi, kidney and vertebral bodies. Zebrafish morphants for either gene develop pigmentary defects and severe craniofacial abnormalities. Finally, we show that CL-K1 serves as a guidance cue for neural crest cell migration. Together, these findings demonstrate a role for complement pathway factors in fundamental developmental processes and in the etiology of 3MC syndrome.

POSTER 51

Association of Genetic Polymorphisms in the Renin-Angiotensin-Aldosterone System and Diabetic Nephropathy in Type 1 Diabetes Mellitus Patients from Tunisia

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ABSTRACT:

Diabetic nephropathy is a major chronic diabetes mellitus complication. It is the leading cause of end-stage renal disease (ESRD) worldwide. Genes in the renin-angiotensin-aldosterone system are interesting candidates for diabetic nephropathy since they increase the glomerular pressure and activate cell proliferation and inflammation. However association studies of polymorphisms in these genes with diabetic nephropathy yielded inconsistent results. We aimed to investigate, by PCR-based genotyping, the association of polymorphisms *ACE* I/D rs4340 and *AGTR1* A1166C rs5186 in 149 type-1 diabetic patients from Tunisia. Of these, 58 had diabetic nephropathy. The remaining (91 type-1 diabetic patients) were nephropathy free after a follow-up of 10 years minimum from diabetes onset. Tunisian type-1 diabetic patients presenting microalbuminuria and DD-genotype, were nearly seven-folds more likely to progress to ESRD than those with I-allele (OR=6.86, 95% CI: (1.63-28.9), p=0.0074, test power 75%). Furthermore, patients with the *AGTR1* rs5186 C-allele had an increased risk to develop nephropathy over those with A-allele independently of *ACE* I/D genotype (OR=2.46, 95%CI: (1.23-4.91), p<0.01 for the dominant pattern of inheritance and OR=3.32, 95%CI: (1.15-9.55), p<0.03 for the recessive pattern) (test power: 90%). Furthermore, we found evidence for a climate contribution to the genetic frequency variation between ethnicities. This study strongly shows that *AGTR1* rs5186 and *ACE* I/D rs4340 gene polymorphisms are independent modulators of, respectively, the onset of DN and its progression to ESRD in T1DM patients from Tunisia.

POSTER 52

Copy number variations shape human brain: The contribution of the array-CGH in the understanding of the genetic bases of congenital brain malformations and cognitive disorders

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ABSTRACT:

Copy number variants (CNVs) are genomic segments which are duplicated or deleted among different individuals. Following the recent technological advances leading to the development of molecular cytogenetic techniques and the emergence of the array comparative genomic hybridization (aCGH), CNVs has gained considerable interest as a source of genetic variation likely to play a role in phenotypic diversity and disease.

Several new genomic disorders caused by CNVs of genes whose dosage is critical for the physiological function of the central nervous system (CNS) have been recently identified.

We applied aCGH in a group of patients presenting CNS anomalies to map novel loci involved in brain malformations. Here, we describe some evidence that CNVs are responsible for congenital CNS anomalies ranging from size anomalies to structural brain malformations and neural migration disorders illustrated, respectively, in patients with microcephaly, agenesis of corpus callosum, lissencephaly and epilepsy, and discuss the mechanisms mediating these rearrangements to suggest candidate genes for the respective disorders within the mapped loci.

POSTER 53

Green synthesis of silver nanoparticles and assessment of their antibacterial activity against multidrug-resistant bacteria

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ABSTRACT:

Background: The study on newer antimicrobial molecules using environmentally friendly synthesis techniques-based nanomaterials has augmented in the last decade. This approach has gained significant attention in the field of nanotechnology as a sustainable and cost-effective alternative in comparison with other physical and chemical methods.

Methods: In our present investigation, we synthesized silver nanoparticles (AgNPs) from extracellular agents produced by bacterial strain of *Bacillus spp* with probiotic properties, from aqueous *Citrus Sinensis* peel extract and from the blue algae *Spirulina platensis*. The fabricated AgNPs were subjected for characterization and screened against various strains of multidrug-resistant bacteria. The antibacterial activity of AgNPs was evaluated by micro-dilution method and their antibiofilm activity was evaluated using the crystal violet test.

Results: UV–Vis spectroscopy (200-800nm) and dynamic light scattering (DLS) were performed for AgNPs characterization. UV–Vis spectroscopy demonstrated the absorption edge at interval of 413,06 nm and 426,13 respectively for *Bacillus spp* and *Spirulina platensis*. The size of AgNPs was determined to be between 68,78 nm and 128,1 nm. The zeta potential value demonstrated the negative surface charge and stable nature of nanoparticles and was found to be between -32,2 and -38 mV. The results showed AgNPs exhibited good antibacterial activity with 12,5 µg/mL of minimum inhibitory concentration and 50 µg/mL of minimum bactericidal concentration. Furthermore, this AgNPs showed a *Staphylococcus aureus* biofilm inhibition more than 57% at a concentration of 25 µl/ml. The eradication of 85% of the established biofilm was observed at a concentration of 50 µl/ml of AgNPs, whereas the dose of 25 µl/ml removed only 38% of preformed biofilm.

Conclusion: Our results demonstrate that AgNPs could be used as potential agent for the control of pathogenic bacteria.

Keywords: Biological synthesis, Silver nanoparticles, Antibacterial activity, Biofilm, DLS.

POSTER 54

Comparative repeated toxicity study in rats: enoxaparin biosimilar product versus reference product.

Kobbi Zina, Pharma.D, Ph.D

ABSTRACT:

During last decades we observed explosion of biosimilars, which require biosimilarity study including comparative safety evaluation conducted on animals.

Enoxaparin is a low molecular weight heparin considered as a biological product. With the development of several Enoxaparin biosimilars, real medical concerns about their safety and efficacy were raised.

This repeated dose toxicity study part of the biosimilarity study consists of preclinical toxicological evaluation of a similar biological version of enoxaparin drug product "Enoxa" manufactured by "les Laboratoires Médis" (Tunisia), compared to the enoxaparin reference drug product "Lovenox" manufactured by Sanofi-Aventis (France). Eighty (80) white Wistar rats were treated with enoxaparin biosimilar, versus the reference product, using subcutaneous therapeutic dose and toxic doses, varying from 3.5 to 100 mg/kg/day. Dose levels were adjusted and ultimately fixed at 3.5 mg/kg/day for a therapeutic dose and 20 mg/kg/day for a toxic dose. A 0.9% sodium chloride solution was used for the control group and the comparative study was conducted over a period of 14 days and 28 days.

Animals were observed before and during study, all animal were euthanized at the end of the study design then necropsy, organs sampling and anatomo-histopathology were then performed. Hematology and biochemistry evaluation of relevant parameters was performed on all animals.

Comparable effects were observed at all doses and all products with few adverse effects observed at doses 20 mg/kg/day for both enoxaparin biosimilar and reference products. Mortality started at a dose of 40mg/kg/day and reached 25%, at 100 mg/kg/day for both products. Since results from the similar biological version of enoxaparin drug product "Enoxa" and reference drug product "Lovenox", have comparable toxicity profile in rats, continuing investigation of biosimilarity on humans to confirm safety and efficacy is suggested.

POSTER 55

Efficacy of perineal reeducation associated with posterior tibial nerve stimulation in the treatment of idiopathic overactive bladder

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Introduction:

Overactive bladder syndrome (OAB) is the occurrence of urge incontinence with or without urinary incontinence, usually associated with pollakiuria. OAB syndrome has a major impact on the quality of life of patients. Its prevalence in adult women is estimated at 31%. To date, rehabilitation with or without anticholinergics is considered the first-line treatment of idiopathic OAB. The stimulation of the posterior tibial nerve (SPTN) is now part of the therapeutic arsenal.

The purpose of this study was to evaluate the efficacy of SPTN associated with rehabilitation on the improvement of idiopathic OAB in postmenopausal women.

Methods:

This is a retrospective study of a series of postmenopausal women with idiopathic OAB. The duration of the study was 2 years from December 2016 to December 2018.

Patients received the treatment (rehabilitation with stimulation) for a period of 4 weeks. Medical treatment with anti-cholinergic drugs was not considered in this study.

The post-treatment evaluation was based primarily on data from the micturition schedule level 2, the urinary symptom score (USP) and the Ditrovie score.

Results:

Twenty-eight patients underwent rehabilitation associated with SPTN.

For the micturition schedule, the mean frequency of voiding by 24 hours before treatment was 9.85 ± 2.9 mictures. After treatment, she dropped to 7.1 ± 2.4 mictures ($p < 10^{-3}$). The mean maximum voiding volume decreased from 385.5 ± 197.7 ml to 413.8 ± 287.2 ml at the end of the course. There was no statistically significant difference ($p = 0.315$). Mean minimal voiding volume increased from 63.5 ± 31.4 ml to 105.5 ± 72.1 ml ($p < 10^{-3}$). The mean frequency of urgencies per night decreased from 1.6 ± 1.4 times to 0.9 ± 0.8 times. There was no statistically significant difference between the two values ($p = 0.10$).

The stress urinary incontinence score increased from 3.5 to 1.29 at the end of treatment ($p < 10^{-3}$). The dysuria score dropped from 0.7 ± 1.2 to 0.25 ± 0.5 . There was no statistically significant difference between the two values ($p = 0.21$).

The quality of life assessment by the Ditrovie score was statistically significant before and after the treatment ($p < 10^{-3}$).

Conclusion: Idiopathic OAB affects the quality of life of patients, both physically and psychologically. Treatment with rehabilitation associated with posterior tibial nerve stimulation showed an improvement in the majority of the parameters of the micturition schedule and the quality of life score except for the mean maximum voiding volume, the number of urguria per night and the score dysuria.

Abbreviations: **OAB:** Overactive bladder; **SPTN:** Stimulation of posterior tibial nerve

POSTER 56

Effectiveness of treatment of overactive bladder in postmenopausal women: Study of Urinary Symptom Profile and Ditrovie score

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Introduction:

Overactive bladder (OAB) is the occurrence of urge incontinence with or without urinary incontinence, usually associated with pollakiuria. Most often, no cause is found and OAB is called idiopathic. OAB has a major impact on the quality of life of patients. To date, rehabilitation with or without anticholinergic treatment is considered the first-line treatment of idiopathic OAB. The stimulation of the posterior tibial nerve (SPTN) is now an integral part of the therapeutic arsenal. Our aim was to evaluate the efficacy of treatment in postmenopausal women followed for idiopathic OAB.

Methods:

It was a retrospective study of 58 postmenopausal women with idiopathic OAB. This study was conducted in the Urology Department (Urodynamic Unit) at Charles Nicolle Hospital of Tunis, from December 2016 to December 2018.

The endpoint was the urinary symptom profile (USP) self-administered which included: urinary stress incontinence score (USI), overactive bladder score (OAB) and dysuria score. The quality of life assessment was based on the Ditrovie score. Medical treatment with anti-cholinergic drugs was not considered in this study.

Results:

Patients were 58 ± 1.2 years older. The average time after menopause was 7.8 years (Min=1, Max=37).

The USI score increased from 3.9 ± 2.9 to 1.7 ± 2 after treatment ($p < 10^{-3}$). The OAB score was reduced from 11.1 ± 4.8 to 5.5 ± 5.1 ($p < 10^{-3}$). The dysuria score dropped from 0.64 ± 1.1 before treatment to 0.29 ± 0.49 . There is no statistically significant difference between the two dysuria scores ($p = 0.13$).

The Ditrovie score decreased from 3.18 ± 0.9 to 2.12 ± 0.9 after treatment ($p < 10^{-3}$).

Conclusion:

Regardless of the type of treatment (stimulation alone or stimulation with rehabilitation), there is an improvement in the score of stress urinary incontinence, the score of the overactive bladder, and Ditrovie. However, there was no statistically significant difference between the dysuria scores before and after treatment.

Abbreviations:

OAB: Overactive bladder

SPTN: Stimulation of the posterior tibial nerve

POSTER 57

Comparison between two treatment techniques for idiopathic bladder hyperactivity in postmenopausal women: Study of the voiding schedule

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Introduction:

Overactive bladder syndrome (OAB) is the occurrence of urge incontinence with or without urinary incontinence, usually associated with pollakiuria. Posterior tibial nerve stimulation (SPTN) is part of the therapeutic arsenal of idiopathic HAV in women. According to current recommendations, this is a second-line treatment after failure of behavioral measures, perineal reeducation and / or anti-cholinergic drugs.

The aim of this work was to compare the efficacy of SPTN treatment alone or associated perineal reeducation through the study of micturition schedule data.

Methods:

This is a retrospective study of a series of postmenopausal women with idiopathic HAV. The duration of the study was 2 years from December 2016 to December 2018.

The patients were divided into two groups. A first group comprising patients who received SPTN alone. A second group comprising patients who had recourse to both perineal rehabilitation associated with SPTN. Treatment with anticholinergic drugs was not considered in this study.

The main endpoint of evaluation at the end of the treatment was mainly based on the data of the level 2 micturition calendar.

Results:

Fifty-eight patients participated in this study. Thirty patients (51.7%) received stimulation alone.

The percentage decrease in the frequency of urination/24h was -20.9% for stimulation alone versus -16.7% for stimulation with rehabilitation ($p=0.154$). The mean maximum voiding volume increased by 6.9% for stimulation with rehabilitation compared to 11.7% for stimulation alone ($p=0.935$). The mean minimum voiding volume increased by 31.2% for stimulation alone versus 21% for stimulation with rehabilitation ($p=0.141$). The frequency of urgency/24h was reduced by -21.6% for stimulation with rehabilitation versus -26.8% for stimulation alone ($p=0.297$).

Conclusion:

There was no significant difference in the micturition calendar data between SPTN alone or associated with rehabilitation. It is necessary to reconsider the place of SPTN alone in the second-line treatment of idiopathic OAB.

Abbreviations:

- ✓ **OAB:** Overactive bladder
- ✓ **SPTN:** Stimulation of posterior tibial nerve

POSTER 59

Behavior and cessation of smoking among hospitalized smokers in the department of pneumology.

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ABSTRACT:

Tobacco smoking is estimated to lead to the premature death. It harms nearly every organ of the body, causes many diseases, and increases the risk of contracting a wide range of diseases

Staying in hospital is a privileged situation not only for patient but also for health professionals whom play a leading role in evaluating smoking and specially to encourage and help smokers to quit.

We conducted a quantitative descriptive study to describe the attitudes of smokers in the pulmonology department of the Farhat Hached University Hospital regarding tobacco. Our study was spread over two months: February and April 2019, during which 50 smokers were interviewed.

All members of our studied population were daily cigarette consumers, which the majority of whom (60%) consumed more than one pack /d and their average age when they took the first cigarette is 16 years old.

Our study showed that the most common reason for smoking was that it calmed them down (86%) and gave them pleasure (74%). Smokers mostly ignored the harm they are doing to themselves, indeed, almost all (96%) were unaware of the composition of cigarettes and only 58% of our patients had an idea of the risks associated with smoking.

As for cessation assistance, 78% of the population affirmed to be helped and motivated by their family and friends, quitting smoking.

Our study focused on patients with low knowledge of cigarette composition and the complications that can result from it. According to Fagerstrom, (80%) had at least a strong dependence on tobacco despite the fact that the motivation test showed that (60%) of smokers had a strong or very strong motivation to quit smoking. Hens One can conclude that the role of health professionals in supporting and helping patients to quit smoking was almost absent, while providing behavioural and pharmacological support should improve the rate of quitting attempts success specially for whom with high quitting motivation.

POSTER 60

Cytomegalovirus glycoprotein B genotype distribution among the Tunisian neonates with symptomatic congenital CMV infection

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Background and aim: Cytomegalovirus (CMV) is the most common cause of congenital infection and a leading cause of sensorineural hearing loss worldwide. CMV exhibits an extensive genetic variability in the genes that encode structural envelope glycoproteins, regulatory proteins, and proteins that contribute to immune evasion. Glycoprotein B (gB) has a potential usefulness for vaccine development and molecular epidemiological studies. There is currently little information regarding CMV genomic diversity in Tunisia. This study aimed to investigate the prevalence of congenital CMV (cCMV) infection in symptomatic neonates and to assess glycoprotein B (gB) CMV genotypes in symptomatic CMV infection.

Methods: A total of 380 urine samples were collected from suspected hospitalized neonates during 2017-2019 at Farhat Hached University Hospital, within the first 3 weeks of life. CMV gB genotyping was performed by multiplex nested PCR.

Results: Overall, 16% of tested neonates were positive. The distribution of gB1, gB2, gB3, and gB4 was detected as 21%, 25.5%, 27.9% and 13.9%, respectively. Mixed genotype infection was observed in 11.6% of the neonates.

Conclusion: This is the first study on symptomatic cCMV infection in Tunisia. gB2 and gB3 are the most common strains associated with cCMV infection. Interestingly, mixed genotype infection was found indicating the vertical transmission of multiple virus strains from infected pregnant women. Further studies are needed to clarify the role that viral load and genotype play in the outcome of congenital infection.

Keywords: Cytomegalovirus, congenital infection, gB, Genotyping

POSTER 61

Cutaneous leishmaniasis : epidemiological and clinical profile in Mednine-tunisia from 2016 to 2018

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Military center of hygiene and protection of the environnement

Introduction :

cutaneous leishmaniasis is a notifiable disease and a serious public health problem in the southeastern regions of Tunisia.

the aim of the study was to estimate the incidence of cutaneous leishmaniasis in Mednine region and to study its epidemiological, clinical and therapeutic profile.

Methods :

it is a descriptive and retrospective study of cutaneous leishmaniasis cases reported to the direction of basic health care (DSSB) of Mednine from 2016 to 2018 and confirmed by a parasitological diagnosis.

Results :

667 cases of cutaneous leishmaniasis (CL) were collected. The cumulative incidence was increasing during the 3 years : it was 29.47 per 100000 habitant in 2016 and 62.15 per 100000 habitant in 2018. The average age was 31.9 years and 53% of men were affected. The frequency of CL was high from September to January. The average consultation time was 1.6 months. The lesion was unique in 44.2% of cases. The lesions were located in the upper limbs. in 48% of cases, lower limbs in 41% of cases and face in 12% of cases. parsitologic diagnosis was performed in 84.7% of cases in a private laboratory. 18% of the patients made a displacement in endemic zone mainly to Tatouine and Sidi Bouzid. The treatment was administarated by peri-lesional infiltration in 75% of cases and intramuscular injection in 25% of cases.

Conclusion :

The results of our study showed that the incidence of cutaneous leishmaniasis is increasing in Mednine from 2016 to 2018 and mainly affects young male patients.

That's why we need to strengthen the prophylactic measures and the ways of fight against CL in this region.

POSTER 62

Analysis of the IC1 and IC2 parental imprinting centers at 11p15.5 in infertile men with MMAF syndrome

Hanafi Oumayma, Brahem Asma, Zarrouk Dalel, Saad Ali, Ibala-Romdhane Samira

Background and objectives: Recently, disorders of epigenetic mechanisms and especially genomic imprinting in sperm DNA have been reported as potentially related to male infertility. Hence the interest of our study that consists to analyze the methylation profiles of "IC1" (H19DMR) and "IC2" (KvDMR) in patients with MMAF syndrome (Multiple morphological abnormalities of the sperm flagellum).

Methods: Our cohort is composed of 4 patients who have consulted our laboratory to explore primary infertility. Sperm samples were analyzed using the spermogram/spermocytogram followed by the selection of the spermatozoa on density gradient and the extraction of the spermatid DNA on which a molecular study of the imprinting centers by the MS-MLPA technique (Methylation-Specific Multiplex Ligation-dependent Probe Amplification) was performed.

Results: The molecular study showed for the first time a pathological profile of the methylation of the IC1 imprinting center, who control the H19 and IGF2 genes. Total demethylation was found in one patient and partial in three others. In all patients, the methylation pattern of the IC2 center was normally demethylated.

Discussion: Several publications have reported an association of parental imprint abnormalities with abnormal sperm parameters (Oligospermia, asthneospermia, teratospermia or OAT). The particularity of our study lies in the confirmation of these anomalies in patients with syndromic teratozoospermia.

For these particular phenotypes, there is a risk of transmission of epigenetic abnormalities and the development in the progeny of congenital syndromes related to parental imprint abnormalities such as Beckwith-Wiedemann through assisted fertilization.

Conclusion: Despite the small size of our study group, we have demonstrated the link between parental imprinting disorders and male infertility. Thus, analysis of the methylation of imprinted genes may be part of the diagnostic assessment of male infertility after well-designed clinical trials prospectively.

Keywords: Epigenetics, DNA Methylation, Imprinting Center, Male Infertility, MMAF.

POSTER 63

Therapeutic compliance in a Tunisian hypertensive population

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Background: Therapeutic non-compliance is actually a public health problem especially in chronic diseases such as hypertension and could worsen cardiovascular morbidity and mortality. For this reason, the current recommendations emphasize the importance of reinforcing therapeutic compliance in hypertensive patients.

Objective of the study: to evaluate the level of therapeutic compliance in hypertensive patients and its impact on blood pressure balance in hypertensive patients.

Type of the study: This is an observational study conducted in the cardiology department in the university hospital of Fattouma Bourguiba Monastir. A follow-up of 3 months was required

The study population: Inclusion Criteria: Patients followed in our department for hypertension (documented and reported in the medical record) and who agree to join our protocol during the recruitment period. Exclusion criteria: Patients who were lost during follow-up.

The judgment criterion: The assessment of Therapeutic compliance using a survey elaborated by the French Committee for the Control of Hypertension, which defines three groups of patient compliance: good compliance (score = 0); minimal or poor compliance (score superior or equal to one).

Statistical analysis: We will use SPSS version 23 software to perform appropriate statistical analyses. The quantitative variables are described according to the mean and standard deviation. Qualitative variables are described according to frequency and confidence interval. The chi 2 test is used for the comparison of workforce distribution; The Student t test for the comparison of Gaussian distributions of quantitative variables. In the multivariate analysis, the variables are included at the 20% threshold, in order to identify impact of therapeutic compliance on blood pressure balance in hypertensive patients. The significance threshold of 5% was used to judge statistical significance.

POSTER 64

**Preliminary results of screening breast cancer in women exposed to second hand smoking.
A cohort study**

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ABSTRACT:

Introduction: Breast cancer is a public health problem. It is the first cause of death and disability among women in the world. Passive smoking is described to be a breast cancer risk factor. We aimed to determine the incidence of breast cancer in women exposed to passive smoking.

Methods: We are conducting a prospective study since September 2017 in the service of preventive medicine in Monastir. Participants aged 40-75 years, were wife of smokers consulting for cessation. Women benefited in parallel from a clinical and mammography exams.

Results: Until October 2019, 146 women were screened. Mean age was 53 years (SD: 8). Nine patients had a positive clinical exam (palpable tumor). ACR 1 and ACR 2 classification were found in 32% of screened women and ACR3 in 6.1% (n=7). A breast cancer was confirmed in one woman with an incidence of 6.8/1000 women exposed to second hand smoke.

Conclusion: Adherence to screening program was low, additional efforts to include a significant number of women in this program.

POSTER 66

Deregulation of microRNAs in Primary Sjögren's Syndrome in a North African population

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Abstract

Introduction:

Sjögren's Syndrome is the second most common autoimmune disease. The underlying pathogenesis of Sjögren's Syndrome remains unknown until now. The disease affects the exocrine glands resulting in multiple organ severe dryness. There are two forms of the disease, primary and secondary. Recently, many studies have demonstrated that epigenetic modifications may induce and/or accelerate the development of auto-immunity. These include alteration of DNA methylation, chromatin remodeling, and microRNA. MicroRNAs are a small non-coding nucleic acid that regulates the expression of genes at a post-transcriptional level.

Materials and methods:

Two independent cohorts of both patients with pSS (n=20) and controls (n=20), one for discovery and one for control, will be included in this study. All subjects are recruited from the Department of internal medicine of the Military Hospital of Tunis. The Salivary gland tissue specimens (labial biopsy) and Peripheral blood samples will be collected, and microRNAs level will be compared on specificity and to the controls samples by a RT-qPCR.

Results:

The present study aims to investigate the microRNAs profile of labial salivary glands and peripheral blood samples obtained from pSS North African patients, and to examine the correlation of miR- levels with the pathological grade. We expect to use microRNAs as diagnostic and prognostic biomarkers.

Conclusion:

The purpose of the study is to determine the miR profile of labial salivary glands and peripheral blood samples obtained from pSS patients and to examine their correlation on different levels with the pathological grade in pSS, to help in the early diagnosis and prediction of prognosis.

POSTER 67

Prospective study on epigenetic profil in Tunisian Rheumatoid Arthritis patients

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Abstract:

Rheumatoid arthritis (RA) is a chronic systematic disease caused by a major dysregulation of the immune system leading to joint destruction and increased risk of co-morbidities. The underlying pathogenesis of RA remains unknown until now, and like other autoimmune diseases, there is no sufficiently sensitive and specific biological or radiographic test to confirm the diagnosis of RA especially at an early stage. Recently, it has been demonstrated that epigenetic modifications may induce and/or accelerate the development of auto-immunity and causing auto-immune diseases.

It is within this framework that we are going to study and identify diagnosis and prognosis micro-RNA biomarkers in the Tunisian RA population.

A total of 50 RA patients and 60 controls were screened from the military hospital of Tunis, all the patients were diagnosed according to the criteria ACR/EULAR 2010. The micro-RNA profile and levels are going to be identified by reverse real-time polymerase chain reaction (RT q-PCR). On the other hand, we are going to measure the cytokines levels IL-1 β , IL-6, IL-10... by enzyme-linked immunosorbent assay (ELISA) and chemoluminescence in order to define the disease activity.

Our project is in progress, we already collected the necessary data, and we are in the molecular assay stage, but we expect to find a difference in circulating micro-RNA profile between the RA patient group and the control group, also to find an association between the disease activity and circulating micro-RNAs levels, which leads to the conclusion that micro-RNAs can be considered as diagnosis and prognosis biomarkers in the Tunisian RA population.

POSTER 71

Therapeutic education protocol for coronary patients: pilot study in the Tunisian context.

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Background: Coronary artery disease is a major cause of morbidity and mortality in the world, particularly in Tunisia, where the cardiovascular diseases are the first cause of death (30% of deaths). Therapeutic education after an acute coronary syndrome (ACS) is a compulsory part of the management of this disease. That is almost neglected in our daily practice.

Objective of the study: Set up a therapeutic education program dedicated to the patient after acute coronary syndrome (ACS).

Type of the study: This is an interventional prospective study conducted in the Sahloul cardiology department.

The study population: Inclusion criteria: All patients hospitalized in the cardiology department for ACS and who agree to join our education program during the recruitment period. Exclusion criteria: Very low intellectual level, deaths in intra-hospital.

The judgment criterion: The main criterion of judgment is the educational level of the patient, evaluated by a questionnaire.

Procedure of the protocol: The included patients are divided into groups according to their initial educational level. The group size did not exceed 6 people. Each group would have two educational sessions. The duration of an educational session is 50 minutes subdivided into 15 minutes for the theoretical course, 20 minutes for the workshop, 15 minutes for the round table. At the end of the education protocol, the patient must know his coronary disease, the cardiovascular risk factors and how to control them, his treatment, the warning signs and the appropriate attitude to deal with, the locations of atherosclerosis and the modalities of surveillance.

Statistical analysis: Quantitative variables are described in accordance with the average and standard deviation. The qualitative variables are described according to the frequency and the confidence interval. The Univariate analyzes are realized to measure the improvement of the educational level after the therapeutic education protocol. The Mc Nemar test is used for comparison between the educational level before and after the therapeutic education. All the tests were realized with risk of 5%.

POSTER 72

Influence of socioeconomic factors on breast cancer screening practice

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Background and aims:

Breast cancer is the most common cancer and the leading cause of cancer death in Tunisian women. Whereas, it is often diagnosed in late stages with an average size at diagnosis of 4cm. Screening is thus necessary.

We aimed in this study to assess the influence of socioeconomic factors on clinical breast cancer examination screening in Tunisia.

Methods:

Data were obtained from the Tunisian health examination survey, 2016: a household survey stratified at three degrees. In each household, one woman aged 15 and over was randomly selected. Women between the ages of 30 and 69 years old were asked if they had undergone a clinical breast examination within the past 12 months.

Univariate analysis was performed in order to assess the association between socioeconomic factors (area of residence, level of education, profession, household's standard of living assessed according to the dwelling characteristics as well as to household capital goods) and clinical breast cancer examination screening. A p-value under 0.05 was considered statistically significant.

Results:

A total of 3521 women were enrolled. Among them, 33.2% [31,3-35,1] had a clinical breast examination during the 12 months preceding the survey.

This percentage varied significantly regarding area of residence (34.4% in rural area VS 32.7% in urban area, $p < 10^{-3}$), level of education (36.5% among women with higher education level VS 27.8% among illiterate, $p < 10^{-3}$) and profession (36.2% among senior executive VS 32.8% among retired or unemployed women, $p < 10^{-3}$)

The percentage of women receiving a clinical breast examination screening increased significantly with the household's standard of living ($p < 10^{-3}$).

Conclusion:

This study revealed an insufficient level of clinical breast examination practice mainly among illiterate, retired or unemployed women and among those with low household's standard of living. Whereas, breast screening practice was more frequent in rural area which can be explained by the high confidence and use of public health structures by rural women.

Strengthening awareness and information campaigns about the necessity of routine breast cancer screening and its benefits, in Tunisian urban primary health care centers, mainly among women with disfavored economic conditions and among health care professionals is thus necessary.

POSTER 75

Evidence Health Policy (C4EHP) in Tunisia

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Introduction

CONFIDE is a capacity building project financed by the European Commission through the Erasmus + Program aiming to strengthen public health research capacity and contribute to evidence based policies in Tunisia. CONFIDE is part of the European Commission 'Cooperation' program that aims to enhance transnational partnerships and build capacity in key development domains. The project is implemented by a Consortium formed by Babeş-Bolyai University (Romania), University of Southern-Denmark (Denmark), Trnava University (Slovakia), and three universities from Tunisia, University of Tunis El Manar, University of Sfax, and University of Sousse. The duration of the project is 3 years (2017-2020).

Mission

the mission of the center is to promote and engender evidence-based public health policies, interlink the main academic, medical, institutional, economic and social stakeholders in the country in order to create a viable ecosystem that would work together in order to tackle the main public health issues, and internationalize the public health research and teaching in Tunisia.

Work

In order to pursue its mission, the C4EHP has created a specialized network formed by medical doctors and public health experts who work together with scholars and experts from several European universities, such as Babeş-Bolyai University (Romania), University of Trnava (Slovakia), Southern Denmark University (Denmark) in order to build research capacity in the main university centers in the country, organize training programs for scholars, public health practitioners, academics and professionals from the non-governmental sector and enhance the public health research in Tunisia. Currently the team of the center is working together with the European partners to implement the CONFIDE project. There has been a first round of train the trainees training into Public Health Policy which has been organized in each Tunisian partner universities. The training has been held in English and French and has covered three modules: Public Health Research, Health Promotion Policies and Evidence-Based Public Health Policy. The train the trainees training session has been followed by a second round which has been delivered in all three partner universities, which targeted mainly students, public health practitioners, young academics, nurses, and professionals from the non-governmental sector

POSTER 76

ASSOCIATION STUDY BETWEEN TLR9 rs352140, TLR7 RS3853839 POLYMORPHISMS AND SYSTEMIC LUPUS ERYTHEMATOSUS

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Introduction/purpose

Systemic lupus erythematosus (SLE) is a complex systemic autoimmune disease. Several genes are involved in genetic susceptibility to SLE. The most recently studied are those of innate immunity including the TLR9 gene and the TLR7 gene, located on the chromosome 3 and X respectively, which encode intracellular receptors. In this study, we investigated the association of the rs3853839 polymorphisms of the TLR7 gene and rs352140 of the TLR9 gene with the SLE in the Tunisian population.

Material and methods:

This is a case-control study of 141 lupus and 187 healthy controls. Genotyping of this polymorphism was determined by the MS-PCR technique (mutagenically separated PCR). The frequency comparison between the two groups was established by the χ^2 test.

Results:

Our results indicate that the SNP rs3853839 of the TLR7 gene is not associated with lupus. In women, the G allele is present in 28% of patients and 29.4% of controls ($p = 0.79$). By analyzing the genotypes, we note a similar distribution in both populations. The CC genotype is found in 53.5% of the controls and in 55.1% of the patients, the GG genotype is present in 12.4% of the controls and 11% of the patients ($p = 0.93$). In men, the G allele is present in 23.1% of patients and 31.5% of controls. On the other hand we found that the SNP rs352140 of the TLR9 gene was associated with SLE susceptibility. The C allele was the most frequently observed, and it was significantly more frequent among patients than controls (51.8% versus 40.17%, $p = 0.003$). Among all genotypes, CC was present among 34.0% of patients with SLE and 23.6% of controls ($p = 0.039$).

Discussion :

In the present study we didn't find an association between TLR7 rs3853839 and SLE susceptibility, whereas C allele of the TLR9 rs352140 polymorphism was significantly more frequent in SLE patients. Further studies on larger samples are required to confirm the association between the TLR9 polymorphisms and the lupus susceptibility.

POSTER 77

Study of association of polymorphism rs2280964 of CXCR3 gene with T1D in Tunisia

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Background: Type 1 diabetes (T1D) is a multifactorial disease that is due to progressive autoimmune β pancreatic islet cells destruction CXCL10, a Th1 chemokine with chemotactic activity, is induced by human pancreatic β cells following EV infection. CXCL10, acting through its receptor CXCR3, allows the migration of activated lymphocytes Th1 to the pancreatic inflammatory site, where they play an important role in the destruction of β cells. Some polymorphisms have been described for CXCR3 gene and associated with different autoimmune and infectious diseases. However, no studies have been done in T1D.

OBJECTIVE: To investigate an association between polymorphism rs2280964 of CXCR3 gene, GADA and IA-2A autoimmunity, and T1D in Tunisia.

MATERIAL AND METHODS: This case-control study was conducted over a two-year period. A total of 315 patients with T1D and 411 healthy controls were investigated for CXCR3 intron 1 polymorphism rs2280964 by MS-PCR analysis. Statistical analysis was performed by the SPSS software.

RESULTS: There were no significant differences in the genotype and allele frequencies distribution of CXCR3 gene rs2280964 polymorphism between patients with T1D and the control subjects. We also show no significant difference in the genotype frequency distribution of CXCR3 rs2280964 between GADA+ and GADA- diabetic subjects ($p = 0.07$) and between IA-2A+ and IA-2A- diabetic subjects ($p = 0.9$). Nephropathy, neurology and retinopathy were not associated with the rs2280964 polymorphism.

CONCLUSIONS: The CXCR3 polymorphism rs2280964 was not associated with T1D in Tunisia.

Keywords: Type 1 diabetes, rs2280964, CXCR3, GADA, IA-2A.

POSTER 78

A TRAF6 genetic variant is associated with low bone mineral density in rheumatoid arthritis

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Introduction. : Rheumatoid arthritis (RA) is a chronic inflammatory disease targeting the synovial membranes afflicting severe structural damage to cartilages and bones with both local and systemic bone loss. Osteoporosis is a potential complication of RA and affects approximately 15–36% of RA patients. Bone destruction in RA is associated with aberrant activation of osteoclasts without equivalent activation of osteoblasts.

TRAF6 is a unique molecule representing a focal point for different pathways involved in bone remodeling and inflammation.

Objective : This study was aimed to investigate the association of the single nucleotide polymorphism of tumor necrosis factor receptor associated factor 6 (TRAF6), rs540386, with low bone mineral density (BMD) among patients with RA.

Material and methods : TRAF6 rs540386 genotyping was performed by mutagenically separated PCR in a cohort of 188 (23 men, 165 women, median age, 56.2 years) adult RA patients and 224 age and gender-matched controls. BMD was measured using dual-energy Xray absorptiometry (DXA) (Lunar Prodigy advance scans, GE Healthcare, USA).

Results : Among the RA patients, 64 (55 women, 9 men) had low BMD comprising of 57 patients with osteoporosis and 7 with osteopenia. Whereas TRAF6 rs540386 was not associated with RA susceptibility, it was however found to be a risk factor for reduced lumbar spine Z-score in the recessive model (OR = 3.34, 95% CI = (1.01–11.00), p = 0.038). This association was confirmed further in the multivariate logistic regression analysis taking into account several potential confounding factors (OR = 3.34 (1.01–11.00), p = 0.048). In addition, mean total femur Z-score was found to be reduced in TT patients when compared to CC + CT patients (-1.30 ± 1.32 versus -0.60 ± 1.05 , p = 0.034). No association between TRAF6 rs540386 and local bone damage was observed.

Conclusion. This study for the first time ever demonstrated an association between a genetic variant of TRAF6 and low BMD among patients with RA. Further investigations are needed to elucidate the exact role of this variant.

POSTER 79

IL-21 receptor rs2285452 polymorphism is associated with Behçet's disease susceptibility in a Tunisian cohort

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Background: Behçet's disease (BD) is a chronic auto inflammatory disorder of unknown etiology. The dysregulation of Interleukin-21 receptor (IL-21R) gene was, recently, associated with different autoimmune and auto-inflammatory diseases, such as Systemic Lupus Erythematosus, rheumatoid arthritis and Type 1 diabetes. Herein, we aimed to investigate for the first time ever the association between two polymorphisms in *IL-21R* gene and BD in a Tunisian cohort.

Methods: *IL-21R* gene polymorphisms rs2214537 and rs2285452 were explored in a cohort of 65 adult BD patients and 116 matched healthy controls. Genotyping was performed using mutagenically separated polymerase chain reaction (MS-PCR) with newly designed primers.

Results: IL-21R rs2285452 genotypes and alleles distributions were statistically different between BD patients and the control group. GA and AA genotypes carrying the minor A allele were more frequent in BD patients than in healthy controls (33.8% and 10.8% vs 23.3% and 3.4%, respectively, $p=0.025$). The association of IL-21R rs2285452 genotypes with BD susceptibility was more significant when the dominant model was used [GG vs GA+AA; $p=0.014$, OR=2.209, 95% CI=1.166-4.185]. The A allele was found to be associated with BD susceptibility (OR=2.155, 95% CI=1.273-3.648, $p = 0.003$). In contrast, IL-21R rs2214537 was found not to be associated with BD susceptibility in any genetic models ($p>0.05$). No association between the different clinical manifestations of BD and *IL-21R* gene two polymorphisms was found in our study. **Conclusion:** The IL-21R rs2285452 was associated with BD susceptibility in our study cohort. Functional studies are required to investigate its exact role in BD.

Key words: Behçet's disease, interleukin-21 receptor, polymorphisms.

POSTER 82

Hospital acquired infection and mortality in a Tunisian Intensive Care Unit

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Introduction

Hospital acquired infection (HAI) continues to cause significant morbidity, mortality, length of stay and hospital costs, especially in the intensive care unit (ICU), because of the debilitated immune systems of their patients and exposure to invasive devices. Our aim was to determine the incidence and mortality rate due to HAI in ICU patients in Tunisia.

Methodology

We conducted a prospective observational cohort study over a three months period in six ICU of University Hospital-Sahloul (Sousse-Tunisia). Patients admitted to the unit were included in the study if they stayed in the ICU for more than 48 hours.

Results

During the study period, **202** patients were surveyed; 66 of them (32.7%) developed 109 episodes of HAI (36.7 HAI/1000 days of hospitalization). The most frequently identified HAI were ventilator-associated pneumonia (VAP) (33.02 VAP/ 1000 mechanical ventilation days).

At ICU discharge, overall mortality rate was 19.3%.

Independent risk factors for acquiring infection in ICU were tracheotomy ($p=0.003$) and length stay (0.000) and duration of central venous catheter ($p=0.000$), those of mortality were intubation ($p=0.001$), tracheotomy ($p=0.001$) and dialysis ($p = 0.000$).

Conclusion

HAI rates in Tunisian ICU were lower than those published in some reports from other North African countries. Mortality rate, dominated by the use of invasive devices need for more-effective interventions control in our hospital.

POSTER 84

Risk factors of illicit substance use among tunisian adolescents of Sousse

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Background and aims:

Adolescence is a period of physical, psychological and socio-cultural transformation, but also of curiosity, experimentation and acquisition. It is mainly during adolescence that people are introduced to the use of legitimate psychoactive substances, such as alcohol and tobacco, as well as illicit substances such as cannabis. Studying its predictors could help deal with this problem more efficiently.

We aimed to determine the prevalence of life time illicit substance use and its predictors among Tunisian adolescents.

Methods:

We conducted a cross-sectional study in two public schools in the governorate of Sousse during the 2017/2018 school year. The data were collected by anonymous self-administered questionnaire, then processed and analyzed using the SPSS software version 20.

Results:

A total of 294 students were included. The mean age was of 17.03 years (standard deviation = 1.51). Females represented 56.1% of participants (sex ratio was 0.78). Among respondents: 60 (20.4%) had used illicit substance at least once. Cannabis was the main substance used by 35 (58.3%) students. The average age of the illicit substance use initiation was 16.3 (± 1.1) years while it was 15.7 (± 1.5) and 14.7 (± 1.8) years for alcohol and tobacco use initiation respectively. Proportions of male students and academic failure were significantly more important among illicit substance users than among non users. While the most influential factors on illicit substance use were: alcohol use, and tobacco use ($p < 10^{-3}$). However, no significant association was found between illicit substance use and video games and internet use.

Conclusion:

This study highlights the strong association between the other risk behaviors and illicit drug use. Future interventions should focus on the whole risk behaviors simultaneously at late adolescence with regard to the environmental context.

POSTER 85

Quality of life of patients with hepatitis B virus infection and chronic hepatitis B : results of a Tunisian study

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Background : Hepatitis B virus (HBV) infection is a relevant health problem with more than 400 million infected people worldwide. **aim:** to analyze quality of life of patients with hepatitis B virus (HBV) infection.

Patients and Methods :

A prospective study, in which patients with HBV infection or chronic hepatitis B (CHB) referred to our tertiary care center between December 2019 and February 2020, will be enrolled. Patients with acute HBV infection, decompensated cirrhosis, hepatocellular carcinoma or extrahepatic cancer, HIV, any alcohol use, pregnant status will be excluded. The presence of psychiatric disorder will be evaluated following DSM-IV-TR criteria. All data will be collected by a face-to-face psychodiagnostic evaluation. Half-structured interview characterized by Likert-style response scales will be used for analyzing the presence of symptoms. In this study, we will use the shorter version WHOQOL-BREF with 26 items of the World Health Organization Quality of Life with 100 items (WHOQOL-100). The mean score of items within each domain will be used to calculate the global domain score. The mean score in each domain indicates the individuals' perception of their satisfaction with each aspect of their life. We will encode all samples into a dedicated database. Descriptive statistical analyses will be developed and data expressed as the mean \pm SD or median (with range) as applicable. 95% confidence interval will be presented where appropriate. Significant differences between variables will be calculated with nonparametric tests. χ^2 -test or t-test will be used for categorical and continuous variables, respectively. Logistic regression will be performed for univariate and multivariate analyses to find possible predictors of nonadequate HRQoL for each of the four HRQoL domains. We will analyze the general pattern's population (sex and age), the kind of liver disease (HBV infection or CHB), time from HBV diagnosis, presence of CHB or compensated cirrhosis, social patterns, presence of psychiatric symptoms. A p value less than 0.05 will be considered significant for all tests. For statistical analyses, we will use Epi info logistic.

POSTER 87

Collaborations in the Tunisian public health output indexed in Medline: a bibliometrics 2000-2015

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Introduction: Health research is widely recognized as one of the driving forces behind the Millennium Development Goals and universal health coverage. The public health research situation in low income countries (LMIC) is characterized by the shortage of productivity. In 2000, the total share of publications coming from LMICs was estimated at 1.7%.

Aim: to describe the Tunisian public health research output between 2000 and 2015 in terms of national and international collaborations.

Methods:

Data source was the database www.epidemiologie-sousse.org implemented since 2000 by the Department of Epidemiology of the University Hospital Farhat Hached of Sousse, Tunisia to make a periodic inventory of all the Tunisian publications indexed in Medline. A Collaboration (national and international) was defined based on the authors' institutions. Papers were categorized into three categories considering the Global burden of disease (GBD) Study definitions. GBD Category 1 concerned communicable diseases, maternal and neonatal health, and nutritional disorders. GBD Category 2 concerned non-communicable diseases, mental and behavioral disorders. GBD Category 3 included studies on injuries. Category 4 included papers dealing with Health System.

Results: Over the study period, 303 eligible articles were published in Medline. Over 80% of publications were produced within a University with geographic disparities in this production. No national collaboration was detected. And International collaboration was found in 18.8% of papers. These collaborations were with French authors and institutions in 33.3%, with American ones in 15.8%, with British ones in 14% and with the WHO in 10.5%. As for focus, 22.8% of collaborations were related to GBD 1, 56.1% of them were related to GBD Category 2 and 21.1% were related to Health System, while GBD category 3 was almost absent in collaborations.

Conclusions:

Collaboration in Public health research output in Tunisia is still insufficient. Building coalitions based on similar missions or geographical proximity can increase efficiencies and promote information sharing, building capacity without incurring significant cost.

POSTER 88

Quality of life in atrial fibrillation: control of rhythm versus control of frequency

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Background: Atrial fibrillation (AF) is one of the most common arrhythmias. In the recent 20 years, there is a debate concerning rhythm control and frequency control. Seven large, long-term controlled studies (up to 5 years) compared the two strategies in patients with persistent AF: PIAF, AFFIRM, RACE, STAF, HOT CAFE, AFCHF, and J-RYTHM. None showed superiority of one strategy over the other. The primary endpoint was cardiovascular mortality. However, establishing sinus rhythm seems to improve the life quality of patients with persistent AF.

Objective of the study: To compare the quality of life in patients with persistent AF according to the selected AF control strategy (rhythm control and frequency control).

Type of the study: This is an observational study conducted in the cardiology department in the university hospital of Fattouma Bourguiba Monastir.

The study population: Inclusion Criteria: Patients followed in our department for non-valve ACFA (documented and reported in the medical record). Exclusion criteria: Patients with chronic heart failure or coronary heart disease or severe cognitive impairment or a physical disability that may affect the quality of life (significant motor deficit, deafness, blind).

The judgment criterion: the quality of life in patients with non-valvular AF according to the selected AF control strategy. The tools used in this evaluation are respectively the FA quality of life score and the SF 12 questionnaire for quality of life, the MMSE score for cognitive decline and HAD test for anxiety and depressive disorders. All questionnaires are translated into Arabic and validated in the Tunisian population

Statistical analysis: We will use SPSS version 23 software to perform appropriate statistical analyses. The quantitative variables are described according to the mean and standard deviation. Qualitative variables are described according to frequency and confidence interval. The chi 2 test is used for the comparison of workforce distribution; The Student t test for the comparison of Gaussian distributions of quantitative variables. In the multivariate analysis, the variables are included at the 20% threshold to identify predictor factors of good life quality for non-valvular AF patients according to the AF control strategy. The 5% significance level was used to judge the statistical significance.

POSTER 89

Quality of life in non-valvular AF patients in Tunisia

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Background

Atrial fibrillation (AF) is one of the most common arrhythmias in the general population. Its prevalence increases with age. The challenge of AF control is now to reduce symptoms and improve quality of life.

Objective of the study: To assess the quality of life in patients with non-valve AF in Tunisia.

Type of study: This is an observational study conducted in the cardiology department in the university hospital of Fattouma Bourguiba Monastir.

Study Population: Inclusion Criteria: Patients followed in our department for non-valve ACFA (documented and reported in the medical record). Exclusion criteria: Patients with chronic heart failure or coronary heart disease or severe cognitive impairment or a physical disability that may affect the quality of life (significant motor deficit, deafness, blind).

The judgment criterion: The assessment of quality of life in patients with non-valvular AF. The tools used in this evaluation are respectively the FA quality of life score and the SF 12 questionnaire for quality of life, the MMSE score for cognitive decline and HAD test for anxiety and depressive disorders. All questionnaires are translated into Arabic and validated in the Tunisian population

Statistical Analysis

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POSTER 90

Genetic origin of congenital heart defects in tunisian population (a clinical and laboratory approach)

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ABSTRACT:

Congenital heart defects (CHD) account for nearly 1/3rd of all major congenital anomalies and thus, are the most common type of birth defects. CHD encompass a wide range of malformations and represent a major cause of infant morbidity and mortality. In Tunisia, the incidence of CHD is estimated to be 6.8 ‰ with a high mortality especially before corrective surgery.

Although genetics may seem a highly specialized sector of cardiology, basic knowledge regarding clinically recognizable syndromes associated with CHD, involved genes, inheritance patterns, recurrence risks, and available screening and diagnostic tools, could assist the cardiologist in understanding the etiology, pathogenesis and prognosis of CHD and therefore allow him to provide better medical care.

From a clinical point of view, we distinguish syndromic forms from non-syndromic forms depending on the presence of additional major malformations, dysmorphism, and/or intellectual disability. Syndromic CHD represent 25 to 30% of all CHD. The exact etiological diagnosis is reached in about 50- 60%, after a good clinical evaluation and different genetic tests, including cytogenetic and molecular cytogenetic techniques.

However, about 50% of CHD causes remain unknown, which emphasizes the importance of genetic research and the use of strong tools such as whole genome sequencing.

Candidate genes have to be much more explored to prove their effect in CHD which would allow developing personalized medicine based on prediction and prevention.

The general objective of this study is to determine the genetic causes of CHDs in Tunisian patients. This knowledge and expertise thus gained will contribute to a better etiological diagnosis of CHD and earlier and better medical care, in order to improve survival of these children born. Moreover, this will improve genetic counseling for the families.

Patients and families with CHD will be recruited from the consultation of the Department of Cytogenetics and Reproductive Biology, Farhat Hached University Hospital, Sousse.

For every patient, we will collect accurate information about his medical history and perform a complete physical examination. Genetic investigations (cytogenetics, molecular cytogenetics and molecular analysis of DNA) will be performed depending on the clinical presentation of the CHD (syndromic vs non-syndromic; sporadic vs familial).

POSTER 91

Genetic study of Disorders of Sex Development (DSDs) and genotype-phenotype correlation

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ABSTRACT:

Disorders of Sex Development (DSDs) represent a major clinical concern that most often present in the newborn or the adolescent. They are caused by an array of various genetic changes, many of which are yet unknown. Considering the diversity and complexity of DSDs, an exact diagnosis is lacking in 10 to 80% of the cases. This is often compounded by the fact that sexual issues are taboo subjects in certain societies, which constitutes an obstacle for the complex management and the prognosis. It is therefore important to generate new molecular data on genetic factors involved in human sex determination, to understand the etiology of DSD in Tunisian patients, to establish a precise diagnosis and to offer a better genetic counseling.

This study is among a thesis project in the laboratory of Cytogenetic, Molecular biology and Biology of Humans reproduction. The cohort consisted of 130 individuals with DSDs.

Our methodology combines chromosomal and molecular analysis for diagnosis of DSD. Karyotype, Fluorescent *in Situ* hybridization (FISH) and array Comparative Genomic Hybridization (aCGH) are our methods of choice to start the search of the genetic defect.

The great success of next-generation sequencing (NGS) in research herald a new era in genetic diagnostics for DSD where currently, causal gene mutations can be found in around 50% of the patients. Consequently, because of a concern for economy, a collaboration with expert centre in the genomic analysis of DSD, Institute Pasteur Paris, is established in order to improve the currently poor diagnostic rate of DSD Tunisian patients using NGS. Recent advances in genomic technologies (Hi-C) have led to rapid advances in the study of three-dimensional genome organization. Mammalian genomes are organized into megabase scale topologically associated domains (TADs). Any disruption of TADs can rewire the integrity of the genome, causing changes in the regulatory architecture that lead to a wide range of congenital malformations such as DSDs.

In order to perform high quality research in the thesis project, the use of both NGS and Hi-C method will help to discover new mechanistic details responsible for these difficult condition malformations.

Keywords: Disorders of sex development, NGS, Hi-C, genetic counseling, etiology

POSTER 98

L'Alliance Contre la Résistance aux Antibiotiques (ACRA) Activities and perspectives

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ABSTRACT:

Officially founded in 2017, ACRA is a tunisian NGO, based in the university hospital of FarhatHached Sousse, intended to raise awareness about responsible antibiotic use and the impact of the increasing antibiotic resistance.

The following activities have been organized during the World Antibiotic Awareness Week (WAAW 2019) in November 2019:

I. Competition for the best posters on antimicrobial resistance (AMR)

Aiming to expand and encourage its audience towards youth and other disciplines, ACRA has launched a competition for best posters in October, raising awareness on the issue of AMR from different perspectives.

II. Awareness campaign open day

During this open day, in addition of the exhibition of all received posters, different activities of public awareness on AMR and responsible use of antibiotics, e.g. workshops on auto medication, antibiotic use in animals and in agriculture.

III. Scientific conference on AMR in primary care

A scientific meeting with all primary care doctors and health workers took place to debate about real life use of guidelines on antibiotic treatment of a frequent community acquired infections, Urinary tract infections (UTI). There was a discussion on the challenges and perspectives on antibiotic prescriptions, and how to better implement these guidelines and make physicians embrace antimicrobial stewardship.

IV. Research

A cross-sectional study has been conducted on antibiotic prescriptions in primary care for UTI in the city of Sousse, between June and September 2019, in order to evaluate these prescriptions according to the national guidelines designed to support physicians in their prescriptions. Another objective was to evaluate the resistance of these community-acquired infections.

V. Perspectives

- Fight for a culture of antimicrobial stewardship at different levels by involving all actors from the health system, youth and civil society.
- Contribute to generalizing guidelines to other types of infections (respiratory, cutaneous)
- Suggest a surveillance system for antibiotic resistance at the community level.

The main partners of ACRA for these activities are:

- Associa med Tunisia: member of the l'IFMSA "International Federation of Medical Students' Associations"
- AssEV – Tunisia (Association of vet students)
- ATEP Tunisian association of pharmacist students IPSF (International Pharmaceutical Students' Federation).
- STMF (Tunisian Society of general/Familial medicine)

POSTER 104

Assessment of patient safety culture in 18 Tunisian intensive care units and determination of its associated factors

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Abstract

Introduction: The intensive care units are a high-risk environments for the occurrence of adverse events with serious consequences. The development of patient safety culture is a strategic focus to prevent these adverse events and improve patient safety and healthcare quality. This study aimed to measure patient safety culture in the intensive care units of the hospitals of the Tunisian center and to determine its associated factors.

Methods: This is a multicenter, descriptive cross-sectional study, conducted among healthcare professionals of the intensive care units in the Tunisian center. The data collection was spread over a period of 4 months (June-September 2017). The measuring instrument used is the validated French version of the Hospital Survey On Patient Safety Culture questionnaire. Data entry and analysis was done by SPSS 20.0 and Epi Info 6.04. Chi-square test was used to explore factors associated with patient safety culture.

Results: A total of 404 professionals participated in the study with a participation rate of 81.94%. All dimensions were to be improved. The overall perception of safety was 32.35%. The most developed dimension was teamwork within units with a score of 47.87% and the least developed dimension was the non-punitive response to error (18.6%). The patient safety culture was significantly more developed in private hospitals in seven of the 10 dimensions.

Conclusion: This study has shown that the patient safety culture still needs to be improved and allowed a clearer view of the security aspects requiring special attention. Thus, improving patient safety culture by implementing the Quality Management Systems and error reporting systems could contribute to enhance the quality of healthcare provided to patients.

POSTER 105

Evidence-based practice among health sciences students: attitudes, knowledge and skills

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ABSTRACT

Introduction: Evidence-based practice (EBP) today is a worldwide approach in optimizing quality of healthcare. This approach remains little known among Tunisian future healthcare professionals. This study aimed to describe health sciences students' competencies in EBP (attitudes, skills and knowledge) and to determine factors associated with these competencies.

Methods: A descriptive cross-sectional study was conducted at the Higher School of Health Sciences and Techniques of Sousse (Tunisia) among health sciences students enrolled during the academic year 2017-2018. Data were collected using a two part questionnaire: a socio-demographic data part and the validated EBP-COQ questionnaire on students' attitudes, knowledge and skills in EBP. The SPSS 20 program was used to analyze data. Independent-Samples T test and One-way ANOVA test were performed to assess the differences between the different subgroups.

Results: 365 students participated to the study (response rate: 93.11%). The overall score of EBP-COQ questionnaire was 3.26 ± 0.53 out of 5. The attitude, skills and knowledge subscales received 4.04 ± 0.41 ; 3.05 ± 0.77 and 2.70 ± 0.74 as mean scores respectively. Demographic and academic features of the students were significantly associated with their competencies in EBP including age ($p < 10^{-6}$), gender ($p < 10^{-3}$), academic degree ($p < 10^{-6}$), year of study for license degree ($p < 10^{-6}$), students' English-language reading skills ($p < 10^{-6}$), students' education in research methodology ($p < 10^{-6}$) and statistics ($p < 10^{-5}$), Familiarity with the term "EBP" ($p < 10^{-6}$).

Conclusion: The reported knowledge and attitudes among the future healthcare professionals is considered below the required competency standards. These findings highlight the urgent need for changes in the current educational strategies to ensure successful implementation of EBP in Tunisia.

POSTER 106

Assessing patient safety culture and its associated factors in 12 emergency departments in Tunisia

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ABSTRACT

Background: Every day in emergency departments, professionals must intervene in difficult and unstable contexts that can pose a risk to patients, especially with an increasing admission rate, worldwide. Within these units, care delivery is provided throughout the 24 hours of the day and it requires an immediate thinking and action to save the suffering patient.

Although, these units are the front line of the health system, they are considered a high-risk environment because of the high frequency of adverse events that occur within. Thus, developing a safety culture in emergency departments is deemed a priority. The purpose of this study is to assess safety culture within emergency departments and to determine its associated factors.

Methods: This is a descriptive cross-sectional and multicenter study, conducted among professionals from all the emergency departments of public and private healthcare institutions in central Tunisia. It spread over a period of 4 months (June to September 2018). The instrument tool used was the self-administered Hospital Survey on Patient Safety Culture questionnaire translated and validated by the "Comité de coordination de l'évaluation clinique & de la qualité en Aquitaine". Data entry and analysis were done using SPSS 20.0.

Results: In total, the study included 442 participants, belonging to twelve emergency units, with a participation rate of 80.35%. The ten dimensions of safety culture were all to be improved. The 'overall perception of safety' was 40.82%. As for 'teamwork within units', it scored the highest with 46%, however, the lowest scores were attributed to 'the frequency of reported adverse events' (19.6%) followed by 'the non-punitive response to error' (19.8%). Several factors have been found significantly related to safety culture. Private emergency departments have shown significantly higher scores regarding nine safety culture dimensions. As well as participating into risk management committees and the certification status of the emergency department.

Conclusion: This study has shown that the level of safety culture needs to be improved in public and private emergency units and, also, underlines the importance of developing safety culture through systemic interventions and the implementation of safety and quality management systems in Tunisian hospitals.

POSTER 107

Prevalence of burnout among operating room professionals in the district of Sousse

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Background:

The operating room is a complex, stressful and potentially dangerous environment. In fact, the professionals practicing in these care units suffer from a continuous exposure to multiple stressors that can, eventually, lead to a state of Burnout. The aim of this study was to estimate the prevalence of burnout in operating theaters and to determine the possible associated factors with this syndrome.

Methods:

This is a descriptive cross-sectional study; carried out among professionals in all operating theaters in the university hospitals of the district of Sousse. It was spread over a 4-month period; from January 1st to April 30th, 2018. The French version of the Maslach Burnout Inventory that has been validated by G Dion and R Tessier in Quebec, was used in data collection. The data was entered and analyzed using the SPSS 20.0 and Epi info 6 software. Also, all confidentiality and anonymity measures were respected.

Results:

A total of 225 operating room professionals participated in our study, with a participation rate of 76.8%. The female gender was predominant and accounted for 60.9%.

Our study showed that the prevalence of burnout was very high (82.6%). Actually, 65.3% of the population had a high level of emotional exhaustion, 34.2% had a high level of depersonalization and 40.4% represented a high level of low self efficacy.

In fact, several factors have been found to promote the occurrence of Burnout syndrome. Indeed, there was a link between burnout and dissatisfaction with work conditions ($P = 0.001$), high workload ($P = 0.001$) and altered relationship with the hierarchical superiors ($P = 10^{-6}$).

Conclusions:

In light of these results, Burnout syndrome is a reality in operating theaters. It represents a public health problem whose consequences do not only affect the health of caregivers but, also, the quality of care provided. Thus, it is essential to plan awareness-raising and prevention actions to combat this phenomenon.

POSTER 108

Effectiveness of a childhood obesity and overweight reducing program in schools in Sousse district: a quasi-experimental study

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ABSTRACT

Recently, childhood obesity has become a real burden, because of its high prevalence, which is rapidly increasing worldwide, especially in Tunisia. Besides, the deleterious impact it bears on the child's health and its heavy costs on society. Thus, a balanced diet and a healthier lifestyle for children, become a vital public health priority.

Schools provide a key environment in which children observe and adopt behaviours. Since, they spend many hours in school during their primary years, it seems necessary to give them daily opportunities to be physically active, eat a healthy diet and develop their self-esteem to maximize their growth and their learning.

It is in this set of mind that we conceived this project that aims to assess the impact of a five-month intervention program with parents' implication and structural changes in the school environment on reducing the consumption of morning and unhealthy snacks and increasing the physical activity among children aged between 6 and 12 in primary schools in the district of Sousse. The proposed intervention will be carried out on 2 groups and a random sample of the schoolchildren will be chosen with a stratification on the level of education. The intervention will concern all the children enrolled in the intervention school. However, the data collection will interest, only, the two chosen samples. For that matter, two questionnaires in Arabic will be pre-tested and used for data collection among participants: one for parents to explore their dietary habits, their knowledge about healthy foods and the importance of physical activity. Another questionnaire will be administered for children, associated with a physical examination to record their height, weight and Body Mass Index (BMI).

As potential impacts, this initiative will show that it is possible to design and implement health promotion actions in schools. Results such as, hopefully, a reduced BMI of obese and overweight children will help to raise awareness among the parents of the children in the concerned schools. Also, it will help to raise awareness as a community scale.

Besides, public and political authorities will be sought to validate and be involved in the undertaken efforts.

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