

## ABSTRACT BOOK

## The Second Qatar Internal Medicine Congress; 30th of October-1st of November 2014; Doha, Qatar

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### Abstract

These are the abstracts of the second Qatar Internal Medicine Congress held between 30th October and 1st of November 2014 in Doha, Qatar. The program of the congress had three different types of sessions, plenary lectures and symposia sessions by invited panel of international and regional experts in addition to free communications selected from submitted abstracts presented as oral or poster communications. The objectives of congress includes a wide ranging update for internal medicine physicians in addition to stimulation of presentation of locally conducted clinical research.

### Introduction

Hamad Medical Corporation is the leading center of excellence in clinical care, education and research in Qatar. Its various departments do organize regular continuous medical education events of various sizes and emphases. These are the abstracts of the second Qatar Internal Medicine Congress held between 29th October and 1st of November

2014 in Doha, Qatar. It was organized by the Departments of Medicine at HMC. The program of the congress had three different types of sessions, plenary lectures and symposia sessions by invited panel of international and regional experts in addition to free communications selected from submitted abstracts presented as oral or poster communications. The objectives of congress includes a wide ranging update for internal medicine physicians in addition to stimulation of presentation of locally conducted clinical research. We though by submitting these abstracts for publication in an open access journal we expand the benefit from the expert presentations. It would give an early publication of the free communications.

## Abstract of Presentations

### I. Invited Lectures:

#### L1. Colorectal Cancer Screening: Challenges and Difficulties

**Nurdan Tözün, Department of Medicine and Gastroenterology, Acibadem University, Istanbul, Nesliar Eser Kutsal, Acibadem University, Istanbul, Turkey.**

The major advances in cancer management seem to have resulted in improved survival in Europe. There are still major differences in survival between countries. These can be attributed to environmental factors, differences in stage of the disease at diagnosis and accessibility to good care, different diagnostic facilities and screening approaches, and differences in cancer biology. Socioeconomic status, lifestyle, education, access to medical care general health conditions might also have a role in disparities among different populations (1)

#### Facts about colorectal cancer (CRC)

Colorectal cancer is the third most common cancer in the world: It takes life from 500.000 people every year and the average number of new cases reaches 1.000 0000 /year. CRC comprises 12.9% of all newly-diagnosed carcinomas in the European population (men 12.8%, women 13.1%) and account for 12.2% of deaths caused by malignancy (2). Since it takes 10 to 15 years to transform from normal mucosa to adenoma and almost 10 years for an adenoma to progress to cancer, this interval can be used for screening and prevention of colorectal cancer (1-3). Early detection of colorectal cancer is possible by an effective and appropriate cancer screening program and cancer related mortality can also decrease accordingly. Large studies have shown that a reduction of up to 90% in the occurrence of CRC has been possible in individuals who underwent colonoscopy with polyp removal (4, 5). In a population-based case-control study, the risk of CRC was strongly reduced up to 10 years after colonoscopy for any indication. Risk was particularly low after screening colonoscopy, even for cancer in the right colon (6). Likewise three randomized studies using fecal occult blood test (FOBT) showed a reduction in CRC mortality of 16-33 % (7-9). Although screening programs were shown to reduce mortality by the removal of polyps and by making early diagnosis possible by FOBT or other methods, the burden of disease and mortality is still high. Primary care physicians play an important role in the primary prevention, early detection and follow up of patients with colorectal cancer. The general practitioners

can be very effective in primary, secondary, tertiary and quaternary prevention with respect to counselling for screening, referral to a specialized center for further examination and management and follow up if necessary .This can also be applied for internal medicine specialists who see a great deal of patients with symptoms related to colorectal cancer and their the first degree relatives.

#### Primary prevention works

GP'S , family physicians and internal medicine specialists have the possibility to influence their patients and their family about healthy lifestyle and warn them about known risk factors for CRC .This includes heredity, smoking , obesity, excessive alcohol consumption, dietary habits (high proportion of animal fat, red meat ,low fiber), lack of physical activity. A Mediterranean diet rich in olive oil, low in red meet and fat, rich in legumes, cereals and dairy products has been found beneficial in CRC prevention .Preventive measures and advices require a good organization, motivation of physicians and healthcare staff, a strong media support with reliable and true information and time management.

#### Colorectal Cancer Screening Strategies

Screening programs are designed for average risk population. Those who belong to high risk groups for CRC should enter a different follow up program and may be screened earlier. These include: people who have a CRC in their first degree relatives or a multiple occurrence in their second degree relatives, people with inflammatory bowel disease, with polyps (adenoma), after surgery for breast, uterus or ovarian cancer, familial polyposis syndromes or Hereditary non polyposis CRC syndrome (HNPCC). In 2003 The Health Ministries of European Union adopted a recommendation on cancer screening and invited EU member states to implement high quality, population based cancer screening programs and in 2010 European parliament signed a written declaration on the fight against colorectal cancer (68/2010). Current recommendation for the asymptomatic population at average risk consist of starting the screening at the age of 50 either by guaiac based fecal occult blood testing (gFOBT) or preferably by immunologic fecal blood testing (FIT) at one or two years intervals and/ or screening by colonoscopy every 10 years /Flexible sigmoidoscopy every 5 years .Recently emerging techniques include CT colonography and stool DNA testing but they are not routinely used. National CRC screening programs have been implemented in 19 out of 27 EU countries, USA, Japan Australia and many other countries. Opportunistic screening where a test is offered to

asymptomatic individuals when they present to a healthcare practitioner for reasons unrelated to CRC are applied in several countries.

### Methods of Screening

Fecal occult blood testing (gFOBT) is a popular screening test because of its simplicity, noninvasiveness, and demonstrated mortality benefit. However this is obscured by its poor sensitivity and inability to detect earlier lesions. Immunochemical tests based on the reaction of human immunoglobulin in the stool with the antibody in the assay have higher sensitivity and specificity compared to gFOBT. The newer stool DNA tests which can detect certain DNA alterations in cancer cells present in the stool are more sensitive but costly. A recent study showed that the sensitivity of the DNA test for the detection of both colorectal cancer (92.3%) and advanced precancerous lesions (42.4%) exceeded that of FIT (10). It is important to set the cut-off value of the test because lower cut off values will have high sensitivity but low specificity and will necessitate more colonoscopies. When performed in optimal conditions, if an FOBT done every two years between the age of 50-75 reaches 50-65% of compliance in the first year and goes higher in the following years, then it is possible to decrease colon cancer related mortality. EU recommended FOBT in 1 to 2 year interval and if positive referral to colonoscopy for men and women aged 50-74 years for CRC screening and It is also used in USA. Flexible sigmoidoscopy (FS) which provides visualization of the left side of the colon and colonoscopy which shows the entire colon up to the Bauhin's valve have the advantage of detecting polyps and enabling their removal.

### Other methods

Colonoscopy is the only method which combines screening, diagnosis and prophylaxis. The need for prior cleansing, potential complications such as perforation or bleeding (although low in experienced hands), the cost and the low uptake by the individuals may limit its use as a primary screening method. Colonoscopy every 10 years and FOBT in 1-3 years combined with FS every 5 years are the recommended strategies in USA and many countries. Imaging studies with Barium enemas, CT/MR colonoscopies, Capsule endoscopy are rarely used nowadays in CRC screening except in special situations such as refusal of colonoscopy by the patient or unfavorable anatomy which precludes successful endoscopic examination (11).

### Planning and outcomes of then CRC screening programs

Screening program will be successful and effective in reducing the mortality only with higher participation of the targeted population. This will also increase its cost effectiveness. Unfortunately there are some hurdles and difficulties in the uptake of the screening program even though the intentions of the authorities are high and optimistic. The difficulties faced by the authorities after successful implementation of the screening program depend on participants, providers, tests, and availability of endoscopists to perform the procedures. The enthusiasm at the beginning may be tempered by the time, there might also be lack of public interest - minimal media support, low uptake of FOBT/Colonoscopy by people, low participation rate (below 20%), lack of feedback for providers. Furthermore European guidelines mandate to consider quality and safety aspects as well as ethical issues in such a program (12).

### Who is adherent to CRC screening?

Studies have shown that men, people who are married, with higher socio-economic status, higher education, with older age (> 60 years) are more compliant to screening (13)

### What are the barriers to screening?

The barriers were reported as the system of the screening (e.g. organized vs opportunistic), cost, environment/area, lack of access to healthcare provider, lack of equal access to Medicare, gender and ethnical difference. More important are the psychological factors in participation to the program which involve: lack of knowledge or awareness, high worry or fear of CRC, fear of procedures (colonoscopy), negative attitudes towards screening as a whole, religious factors (determinism), lack of effective communication with targeted people etc. Recent studies suggest that both community intervention and physician awareness are needed to improve patient compliance with fecal occult blood testing and colorectal cancer screening in general (14, 15). A rational planning taking into account the cost of the program, the organization team (GP's, family physicians, Internal medicine specialists, nurses, health care workers etc.), educators, media representatives constitute the backbone of the initiative. The targeted people need to be invited (with several reminders when necessary) either via GP's (Germany, France, Czech Republic, Slovakia) or directly by an invitation letter (UK). The GP's, national authorities, insurance companies, media, endoscopists, IT people, statisticians, and educators should form a big and

**Table 1.** Practical aspects of the organization for CRC screening.

Screening should be high in agenda of practice

Team work is essential. General practitioners and family physicians, should have time dedicated to the process and be differently remunerated for this special event.

The staff should be well educated prior to screening

Screening should be well advertised in public and offices by leaflets, posters and TV programs

Quality assurance should be followed regarding the tests and the procedures as well as the documentation

Targeted activities should be organized to raise public awareness

The cost analysis should be well operated by professionals

Health insurance system (private/governmental) should take care of the financial aspects of the program.

strong chain of collaborators in order to assure the success of the screening program.

### Conclusion

Practical aspects of the organization for CRC screening require all the steps summarized in table 3. Finally, future research is needed in order to increase uptake of screening, to improve cost-effectiveness analysis, to find better ways of educate care providers and to implement more efficient methods to raise awareness about primary and secondary prevention from CRC

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## **L2. Current knowledge of tumor biology empowers us to contrast the globally growing tumor burden.**

**Pier Giorgio Natalik The Mediterranean Task Force for Cancer Control, The Collegium Ramazzini, Italy.**

The multidisciplinary oncology research of the last decades is steadily achieving a decrease of the incidence of tumor-related deaths, but does not appear to contrast the increasing incidence of cancer that we are witnessing worldwide. This raises the question as to whether we are fully exploiting the power of prevention and early diagnosis on the basis of the present knowledge and in view of the decrease of scarcer economic resources. Indeed epidemiology and cancer registries has been able to identify populations at risk, infectious and environmental factors and diseases heralding tumor development. Biology has provided ample evidence that tumors arise from the accumulation of genetic lesions induced by endogenous and exogenous factors. Clinical investigation has firmly established that early diagnosis is often associated with cure and that advanced tumors harbor a complex spectrum of deranged metabolic pathways associated with metastatic spreading. This heterogeneity is responsible for the resistance to available treatments and most likely impairing the full exploitation of the emerging *targeted* therapies. In view of the above, it is mandatory to enforce primary and secondary prevention into primary healthcare which should tackle cancer-specific priorities according to the regional needs. In this context education, information, training and legislation should be empowered for optimizing available resources with the aim of shifting the cancer emergency from individuals to populations and of diminishing the exiting inequalities in access to cancer management

## **L3. Specific actions by internists and general practitioners for cancer prevention and early detection: Guidelines by MTCC, the Mediterranean task force for cancer control.**

**Massimo Crespi, National Cancer Institute “Regina Elena”, Roma, Italy.**

General practitioners (GP's) have to be the key promoter and guardian to address the possible actions in primary prevention and to prescribe the screening and early diagnostic procedures relevant to avoid advanced diseases, with its related suffering and economic burden on health structures. In spite of improved survival, cancer incidence is expected to increase steadily worldwide in the near future, particularly in low income countries. GPs' mission is to treat patients as individuals, but also in aggregate, as a population, preserving its working power and wealth production. In view of the GPs' closer link with the territory, their deeper knowledge of the patients' family history and co-morbidities as well as environment and working conditions, they may play a highly relevant role in cancer prevention and early diagnosis. As first easy accessible health professionals in the community, GPs should be the source of authoritative information and counseling, being therefore in the best position to deliver prevention and care messages and to perceive symptoms scarcely perceptible or perhaps denied by the patients. If needed, they represent the key advisors to address patients to qualified specialists and Centers for further disease management. Collectively, these GPs' actions are likely to result into the vanishing of hard to die confounding myths about cancer such as, “cancer is a death sentence and a disease of the wealthy, aged person of the rich countries”. They will also increase the patients' awareness, contribute to the buildup of advocacy in the community and help leveling disparities into access to standard care, a significant contribution to the containment of health system expenditures. Since cancer “cannot be fought in solitude” (Chart of Paris, 2002) GPs, together with researchers, teachers, family, legislators, and Government are major actors in contrasting the ongoing cancer global epidemic. The available scientific data on these issues were evaluated by the experts gathered under the supportive Mediterranean Task Force for Cancer Control (MTCC) and specifically tailored as statements targeted to the Mediterranean populations and their common cultural background. Those statements, available in many languages and summarized in two simple and straightforward brochures (presented to the audience), will be discussed with the attending physicians and supported with available data, especially for the actions to be undertaken in the fight

against Breast, Colorectal and other preventable cancers.

#### **L4. Systemic cancer therapy: achievements and challenges that lie ahead.**

**Valentina Iacobelli<sup>1</sup>, Federica Tomao<sup>1</sup> & Stefano Iacobelli<sup>2</sup>** 1. Department Ob/Gyn, University of Rome “La Sapienza” and 2. Department of Experimental and Clinical Sciences, University “G. D’Annunzio” of Chieti-Pescara, Italy.

In the last decades, progresses in the systemic therapy of cancer, including chemotherapy, hormonal therapy, targeted therapy, and immunotherapy have been responsible for improvements in cancer related mortality in developed countries. Although such advancements have yet to benefit all cancer types, systemic therapies have led to an improvement in overall survival in both the adjuvant and metastatic setting for many cancers. As an example of the “paradigm shift”, here we report some of the major milestones achieved and advances made in the systemic therapy of breast cancer, which, globally, remains the most common cause of cancer and cancer death in women. While breast cancer is potentially curable when detected at an early stage, it remains incurable in the metastatic setting. We review past and current therapeutic strategies and present a synopsis of the novel agents in use today. The current perspective of breast cancer management is based on the rapidly evolving and increasingly integrated study on the genetic, molecular, biochemical and cellular basis of disease. The challenge for the future is to take advantage of this knowledge for the prediction of therapeutic outcome and develop therapies and rapidly apply more novel biologic therapeutics. The management of breast cancer continues to evolve.

#### **L5. Primary hepatocellular carcinoma: Etiology, pathogenesis and prevention.**

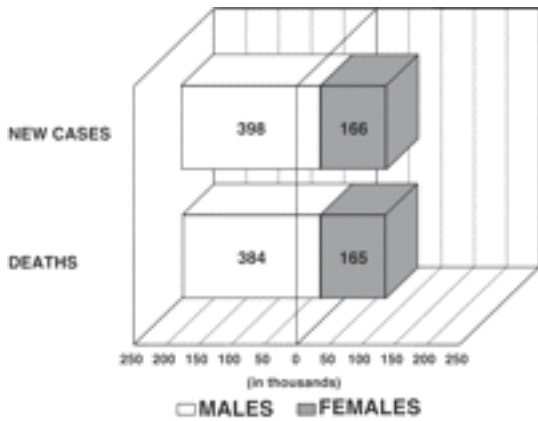
**Alfredo Saggioro, Ospedale dell’Angelo Venice and University of Padua Medical School, Italy**

Human liver cancer, primarily hepatocellular carcinoma (HCC), is both common and lethal. Primary human liver cancer, of which hepatocellular carcinoma (HCC) is by far the predominant type, is a major cause of cancer death worldwide, accounting for over half a million deaths per year. The number of new HCC cases occurring each year is roughly equivalent to the number of deaths (Figure 1). Chronic infection with hepatitis B or C viruses (HBV, HCV) have both been recognized as human liver carcinogens with a combined attributable fraction of at least 75% of all HCC cases (Table I). The global epidemiology of HCC is striking,

with both geographic and temporal patterns of incidence paralleling exposure to these viral etiologic factors. The highest HCC incidence rates occur in sub-Saharan Africa and parts of Asia, areas endemic for chronic infection with HBV.

Human liver carcinogenesis is much more complex than simply reflecting the presence or absence of an antecedent viral infection. The natural history of infection with HBV or HCV and the subsequent development of serious sequelae including liver cirrhosis and HCC notably varies depending on factors as disparate as the age or gender of the infected person to the genetic characteristics of the virus. Given chronic HBV or HCV infection, there are marked geographical differences in risk for HCC which remain largely unexplained. Although the clinical presentation of HCC is uniformly advanced with a generally dismal prognosis irrespective of etiology, there is significant variation in the pathologic, radiographic and natural history of the disease. The pathways by which HCC develop are heterogeneous and influenced by a variety of environmental and host factors. The role of other carcinogens, namely aflatoxin exposure and alcohol consumption, are clearly recognized in HCC, but the mechanisms of these factors, both individually and in conjunction with viral infection are not well defined. Human primary liver cancer is classified into biologically distinct subgroups based on cellular origin. Liver cancer stem cells (CSCs) have been recently described. In recent years, molecular biology techniques along with advances in research on the pathogenesis of HCC become more in-depth.

Many genes are known to be involved in HCC formation changes that cause the accumulation of genetic changes by control of cell growth and differentiation mechanism of the disorder, but the balance between growth and differentiation is controlled by two types of genes: oncogenes and tumor suppressor gene. Involved in cell proliferation and tumor suppressor genes, apoptosis and DNA replication process, its expression led to loss of control the occurrence and development of HCC. A risk factor is anything that increases a person’s chance of developing cancer. Although risk factors often influence the development of cancer, most do not directly cause cancer. Some people with several risk factors never develop cancer, while others with no known risk factors do. However, knowing the risk factors may help to make more informed lifestyle and health care choices. The following factors can raise a person’s risk of developing HCC. The main risks in the United States are cirrhosis of the liver and non-alcoholic fatty liver disease (NAFLD) are viral hepatitis, cirrhosis, Obesity, NAFLD, and Diabetes,



**Figure 1.** Worldwide primary liver cancer incidence and mortality for the year 2000. The estimated annual number of new cases approximated the number of deaths (in thousands). Adapted from reference (1).

Major etiologic factors	Incidence data	Mortality data
Hepatitis B infection (>50% <sup>b</sup> )	551 000 cases/year worldwide	529 000 deaths/year worldwide
Hepatitis C infection (>25% <sup>b</sup> )	5th most common cancer	3rd most frequent cause of cancer death
Alcohol consumption	83% of all cases in developing countries	8.8% of total cancer death
Aflatoxins	54% of the total cases in China	
Tobacco smoking		
Obesity/diabetes/fatty liver		
Iron overload		

<sup>a</sup>Adapted from reference (1)

age, gender and environmental factors. Research continues to look into what factors cause liver cancer and what people can do to lower their personal risk. There is no proven way to completely prevent this disease, but there may be steps that can be taken to lower liver cancer risk.

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**L6. Neuroendocrine tumors**

**Rafie A. Yakoob, Division of Gastroenterology and Hepatology, Hamad Medical Corporation (HMC) and Weill Cornell Medical College, Doha, Qatar.**

Neuroendocrine tumors (NETs) that arise in the gastroenteropancreatic system (GEP-NETs) are a fairly rare and diverse group of tumors. Although relatively rare (in 2004 in the US, the estimated incidence was 5.25 new cases per 100,000 and the prevalence was 35/100,000), the incidence of GEP-NETs has risen dramatically since 1973.

GEP-NETs have the ability to hypersecrete signalling hormones, which can result in a variety of potentially debilitating effects. NETs are termed functioning when they cause clinical symptoms in patients, not simply for hypersecreting hormones. Tumors typically become functioning following metastasis to the liver; the variety and intensity of symptoms resulting from GEP-NETs magnifies as tumor progression occurs. Most patients with GEP-NETs have metastatic tumors at presentation. The vast majority of NETs express somatostatin receptors (sst). There was a significant increase in reported annual age-adjusted incidence from 1.09 per 100,000 in 1973 to 5.25 per 100,000 in 2004. , it is estimated that the incidence in 2013 could be nearly 8 per 100,000. GI-NET is broken down by location: appendix, stomach, colon, small intestine, rectum and cecum. When these individual locations of the GI tract are summed the incidence for GI NET > lung NET>pancreatic NET. It is important to remember that even though the incidence of GEP NET is low, because these patients can live for a long time after diagnosis, the prevalence is quite high in that it is the second most prevalent GI malignancy (colorectal cancer is the most prevalent). Pancreatic NETS (pNETs) are rare and usually slow-growing neoplasms, with symptoms resulting from excess hormone production or mechanical problems secondary to tumor bulk. 6.4% of all NETs are found in the pancreas; pNETs may or may not have secretory symptoms. Secretory symptoms are related to the specific hormone released. Tumors without secretory symptoms (nonfunctional) may still secrete peptides; however, they cause no specific clinical symptom. Presence of symptoms is due to the tumor bulk. Diagnostic imaging techniques include multiphasic CT/MRI, Octreoscan™, EUS, and PET with various radiolabeled agents. Prognosis varies significantly and is dependent on tumor grade, stage, patient age at diagnosis, primary tumor site, tumor “functionality,” patient history, and whether a patient has undergone surgery. A prospective, double-blind, randomized, placebo-controlled phase III trials assessing the efficacy and safety of everolimus plus best supportive care vs. placebo plus best supportive care in patients with advanced pNET or treatment with everolimus, with and without concomitant octreotide LAR, was well tolerated. Results from these studies suggest that everolimus alone or in combination with octreotide LAR provides antitumor benefits and is promising treatment option for patients with advanced pNET who experienced progression during or after chemotherapy.

### **L7. Arrhythmias for clinician: Tips for diagnosis and treatment**

**Fathi. Idris Ali, Department of Medicine in the Division of Cardiovascular Medicine at Vanderbilt University Medical Center, Nashville, TN, USA.**

Arrhythmias are common clinical problems, where correct diagnosis is crucial for appropriate and effective treatment. Nonetheless, precise diagnosis of arrhythmias can be very challenging using 12-lead-EKG. Therefore, clinicians should have some approach to sort out these challenging cases. In this “interactive” session, we will present several challenging arrhythmia cases and illustrate clinical and electrocardiographic “pearls” to help clinicians establish the correct diagnosis. These tips are based on clinical experience gained from both cardiac devices as well as electrophysiology laboratory, the gold standard for rhythm diagnosis.

### **L8. Diabetes and heart disease: The cardiologist view**

**Abdulrazag A. Gehani, Hamad Medical Corporation and Cornell Medical College, Qatar**

Diabetes is a major risk factor for heart disease. It affects every aspect of the practice of cardiology. Diabetics have higher incidence of all major cardiovascular events. Cardiovascular interventions are also associated with higher morbidity and mortality. Unlike general population, diabetic women have twice the mortality of diabetic men. While cardiovascular mortality is showing some decline, worldwide, diabetes seems to be on the increase. This is especially so in some regions, including the gulf region. A diabetic man without previous MI has similar the survival curve to a non –diabetic who already had a myocardial infarction (MI). If diabetes is added to a previous MI, the mortality is doubled in men and quadrupled in women. Despite these major adverse features of diabetes, there has been much understanding of the vascular and endovascular pathology of heart and vascular disease in diabetes. This lead to major preventative, pharmacological and interventional therapies with positive impact on management. The understanding of the crucial difference in the patho-physiology between ST Elevation and Non-ST Elevation MI syndromes has given evidence based therapy that translated into positive results. Dual antiplatelet therapy for Non STEMI syndromes and Primary angioplasty for STEMI have made a larger impact in diabetics than non-diabetics. The addition of GBIIA/IIIB Receptor blockers has also added to this effect. Contrast nephropathy is a major determinant of post intervention morbidity and



mortality. Several prophylactic regimens have been studied with variable results. Rehydration and Sodium Bicarbonate infusion prior to the procedure appear to give the best results. Hyperglycemia and HBA1C are independent risk factor for the long term prognosis for diabetic complications. Hyperglycemia on admission and during Acute MI phase are also important determinants of prognosis. However, HBA1C is not as important as hyperglycemia in this acute setting. DIGAMI-I trial suggested that insulin during AMI improves survival; however, DIGAMI-II trial tested this conclusion in a three-limb study and concluded that control of hyperglycemia rather than insulin which improved survival. Both trails and others agree that glycemc and metabolic control during AMI are important. In the long term, the target blood pressure and LDL-cholesterol levels are much lower than that desirable in non-diabetics. This has now been reflected in many international guidelines.

In conclusion, diabetes affects every aspect of the heart and vascular tree. It also affects every aspects of the cardiologist practice. Improved understanding of the underlying pathology and evidence based prevention, pharmacological and interventional strategies have made a major positive impact on the management of heart disease in diabetic patients.

#### **L9. Management of acute stroke**

**Ashfaq Shuaib, Department of Medicine and Neurology, University of Alberta, Alberta, Canada.**

The brain has very limited ability to withstand the effects of ischemia. For every minute of cerebral ischemia, 1.4 million brain cells die. Occlusion of a major brain artery is therefore no different than cardiac arrest and requires a similar degree of urgency in evaluation and management. The assessment of a patient with suspected stroke begins with a rapid examination (10 min), imaging (no more than 25 minutes from the time the patient reaches the hospital) and a decision to thrombolysse or not once the imaging is completed. All patients in whom symptom duration is of less than 4.5 hours are candidates for iv rt-PA unless there is a major contraindication to treatment. It is important to remember that acutely ill stroke patients are at risk for complications, especially aspiration pneumonia, pressure sores, venous thrombosis and infections. These are ALL preventable complications and remain the major cause of delayed discharge from hospital. My presentation will focus on how best to rapidly evaluate acutely ill patient with a suspected diagnosis of stroke, what are the treatment options to prevent brain damage and how to prevent

complications while the patients are admitted to hospital.

#### **L10. Recent advances in stroke prevention**

**Ashfaq Shuaib, Department of Medicine and Neurology, University of Alberta, Alberta, Canada.**

Stroke is a preventable disease. Common risk factors for stroke include hypertension, lack of exercise, diabetes, smoking and hyperlipidemia. Increased in the awareness and better treatment of hypertension has led to a more than 50% decline in the incidence of stroke in the developed world. This has unfortunately not translated to the developing world where stroke still remains the number one cause of death. Patients with atrial fibrillation (AF) and transient ischemic attacks (TIAs) are at an especially high risk of stroke and require an aggressive to management. Recent research suggest that prolonged cardiac monitoring for 3 weeks or longer should replace Holter monitoring for detection of AF and MRI imaging is essential in the diagnosis of high risk TIA patients. This presentation will focus on important tools in the investigation of patients with suspected diagnosis of TIAs and how best to manage such patients to prevent a stroke

#### **L11. Management of diabetes in hospitalized patients.**

**Abdul-Badi Abou-Samra, Department of Medicine, Hamad Medical Corporation, Doha, Qatar.**

Hyperglycemia that occur in the hospital present a special challenge. Regardless of its cause hospitalized patient who have hyperglycemia has an increased risk of morbidity and mortality. In different communities about 25-50% of hospitalized adult patients have diabetes; in 20% to 30% of them this could be newly recognized. The hospital environment and the fact that patients may require procedures or diagnostic studies, which require the patient to be NPO, make the hospital environment very unstable. Any improvement, or deterioration, in the patient's acute condition, has a major impact on glycemc control. Thus home medications may not be suitable for use in the hospital. The management plan must be flexible and can be adjusted based on physical activity, feeding (NPO, skipped meals, IVs, TPN and G tube) and comorbidities.

Only a proactively designed basal-bolus insulin plan, plus pre-meal correction doses, with individualized glycemc target can address the variations encountered during hospitalization. The old sliding scale insulin dosing method results in extreme glycemc excursions and should no longer be used in the hospital. Oral medications should be stopped and replaced with basal-bolus insulin particularly

for patients who are likely to be NPO or who are likely to skip meals for diagnostic or therapeutic procedures. Glycemic targets of the management plan should be individualized and documented in the patient records to be the guideline for insulin therapy. The hospitalization period shall be utilized as an opportunity to impact on self-management and patient education. The inpatient glycemic management team should pay a attention to details of glycemic responses to meals and insulin. All patients shall have at least 4 capillary blood glucose (CBG) determinations, before meals and at bedtime. Pre-meal insulin doses should include a correction dose based on the pre-meal CBG; the pre-meal dose and the basal insulin dose should be adjusted daily based on recent response and change in the patient conditions. Coordination of timing of pre-meal CBG, pre-meal insulin dose and meal is one of the major challenge in the management of diabetes in hospitalized patients. Discharged patients shall be given an individualized transition plan to bridge the hospital insulin doses to the patient's home environment.

**L12. Dyslipidaemia in diabetes mellitus: will risk based decision-making alter current statin prescribing pattern?**

**Tarek M. Fiad. Centre for Diabetes and Endocrinology, Sheikh Khalifa Medical City, Abu Dhabi, United Arab Emirates**

The American Heart Association (AHA) and the American College of Cardiologists (ACC) in their new guidelines eliminated titration of lipid lowering therapy to a specific LDL-C target and introduced a risk-based decision making for which moderate- or high-intensity statin therapy is recommended<sup>1</sup>. The AHA/ACC guidelines represent a move away from the conventional practice whereby titrating therapy is based on driving the prevailing LDL-C level to a defined target, a practice currently been recommended by the American Diabetes Association (ADA)<sup>2</sup>. Assessing the impact of implementing the new guidelines on day-to-day practice in diabetic population has not been formally examined. When our clinic practice was modeled to adopt these guidelines, we observed the following: 1) In the context of primary CVD prevention and based on the ADA guidelines<sup>2</sup>, the number of diabetic patients aged between 40-75 years who fulfilled the requirement for primary prevention with statin therapy was 386 out of 445 patients (86.7%) with a mean on treatment LDL-C of 2.1 mmol/L. The impact of adopting the new AHA/ACC guidelines is: a) 59% will be considered for high-intensity statin therapy on grounds of 10-year ASCVD risk  $\geq 7.5\%$  (up from 25%);

and b) 41% being treated with moderate-intensity statin therapy on grounds of 10-year ASCVD risk  $< 7.5\%$  (down from 61%). 2) Among subjects with history of CVD, when treatment was based on the ADA guidelines, the mean on treatment LDL-C was 2.04 mmol/L. Those received moderate- and high dose-statins were 62 (48% with mean LDL-C 2.04 mmol/L) and 59 (46% with mean LDL-C 2.03 mmol/L) patients respectively. Adopting the new AHA/ACC guidelines mandates that all the 129 patients (100%) being considered for high intensity statin therapy (up from 46%). In conclusion, applying the new AHA/ACC guidelines has major impact on prescribing pattern and will lead to doubling in the number of patients being considered for high- rather than moderate-intensity statin therapy in the setting of both primary and secondary prevention of CVD.

1. Stone NJ et al. 2013 ACC/AHA guideline on the treatment of blood cholesterol to reduce atherosclerotic cardiovascular risk in adults: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines. *J Am Coll Cardiol.* 2014 1;63 (25 Pt B):2889-934.

2. American Diabetes Association. Standards of medical care in diabetes--2014. *Diabetes Care* January 2014vol. 37 no. Supplement 1 S14-S80.

**L13. Diagnosis and treatment of diabetic neuropathy**

**Rayaz Malik, Department of Medicine at Weill Cornell Medical College, Doha, Qatar and New York, USA.**

There are currently no FDA approved drugs for diabetic neuropathy per se but there are 3 approved drugs for painful diabetic neuropathy. A key to adequate and early management is making the correct diagnosis. Painful diabetic neuropathy is often misdiagnosed and goes untreated or inappropriately treated for many years. For diabetic neuropathy we lack objective, sensitive surrogate end points to identify a worsening or improvement. Currently advocated tests, which the FDA approves includes neurophysiology and QST. However, they focus on the large fibres, instead of the more abundant and clinically relevant small fibers, which mediate pain, tissue blood flow and inflammation. Furthermore, these tests show poor reproducibility and lack sensitivity for detecting early nerve damage and repair. Therefore, multi-million dollar trial programmes may have failed because of the use of tests, which were unable to detect an improvement in nerve damage. Sophisticated brain imaging techniques have provided considerable insight into painful diabetic neuropathy and will be discussed, together with their limitations! Skin

biopsy is a potential alternative for imaging small fibers, but it is an invasive and time-consuming technique, which requires laboratory expertise. We have pioneered the novel ophthalmic technique of corneal confocal microscopy that allows a non-invasive means to quantify structural nerve fiber damage and repair with great sensitivity, enabling early diagnosis and intervention. In relation to interventions, it is clear that neuropathy is “a microvascular complication” of diabetes, just like nephropathy and retinopathy,” and cardiovascular risk factors such as blood pressure and lipids are in fact a stronger predictor of whether a patient will develop peripheral neuropathy than glucose control. Indeed with regard to treatment even tight glycemic control has been shown at best to delay progression of neuropathy in Type 1 but not Type 2 diabetes. However, there are data to support the role of triglycerides in diabetic peripheral neuropathy and fenofibrate, a triglyceride lowering agent, has just been approved in Australia for the treatment of diabetic retinopathy based on data from the FIELD study. The same study also showed that fenofibrate reduced minor amputations by 50%.

#### **L14. Osteoporosis for the internist**

**Yousef Al Saleh, The Adult Endocrinology Division, Department of Medicine, King Abdulazeez Medical City in Riyadh, Saudi Arabia**

Osteoporosis is a very common bone disorder with devastating consequences. It is very common in the kingdom of Saudi Arabia (KSA) and the gulf region as shown in multiple studies done in the region. The wide spread occurrence of vitamin D deficiency might play a role in the exceptionally high prevalence of osteoporosis in the gulf region. Osteoporosis remains under diagnosed and under treated even in western countries. The National Institute of Health in the United States Consensus Development Conference has redefined osteoporosis as a “skeletal disorder characterized by compromised bone strength that increases the risk of fracture”. Bone strength primarily reflects the integration of bone density and bone quality. An osteoporotic fracture occurs when a traumatic force is applied on an osteoporotic bone. Thus, osteoporosis is a significant risk factor for fractures. Osteoporosis, once thought to be a natural part of aging among women, is no longer considered age or gender-dependent. It is largely preventable due to the remarkable progress in the scientific understanding of its causes, diagnosis, and treatment.

Mortality and morbidity following hip fracture are significantly high. One in 5 patients die within one year of

a hip fracture, and only one –third of patients regain their pre-fracture functional level and one-third require nursing home placement. Estimated direct cost for the treatment of osteoporotic fractures in the US is \$14 billion annually. In Europe, the annual economic burden of osteoporosis was estimated at US\$ 960 million in UK, US\$ 740 million in France, US\$ 2.5 billion in Germany and 150 million Euros in Belgium. Predictors of low bone mass include female gender, increased age, estrogen deficiency, white race, low body mass index (BMI), family history of osteoporosis, smoking, and history of prior fracture. BMD measurement of the hip and spine should be used to diagnose osteoporosis and for monitoring response to interventions. The WHO diagnostic criteria are used for the diagnosis of osteoporosis. WHO operationally defines osteoporosis as bone density 2.5 standard deviations (SD) below the mean for young white adult women. The launch of WHO technical report: Assessment of osteoporosis at the primary health care level and the related FRAX® tool are major milestones towards helping health professionals worldwide to improve identification of patients at high risk of fracture for treatment. In the past 30 years, major progress have been made in the treatment of osteoporosis. Essentials of this disease for the internist are going to be discussed during this presentation.

#### **L15. Vitamin D: the truth and the legend**

**Mohammed Hammoudeh; Hamad Medical Corporation, Doha, Qatar**

The association of adequate vitamin D levels with healthy bones has been known for over 70 years. The two sources for vitamin D are synthesis in the skin from sunlight exposure and food. 15-20 minutes of sunlight exposure 3 days per week will provide adequate vitamin D in many people. vitamin D deficiency is world-wide problem including the Arabian Gulf area and in all age groups. There has been a significant increase in interest regarding vitamin D during the last ten years due to the publication of studies linking low vitamin D levels with an increased risk of cancer (breast, prostate and colon), diabetes, multiple sclerosis, rheumatoid arthritis, autoimmune diseases and heart disease. The association of vitamin D with these diseases, and their prevention with vitamin D supplementation, has not been proven via rigorous prospective clinical trials. Interest in Vitamin D supplementation has also increased due to potential (but still unproven in large clinical trial) benefits which include lower blood pressure in the winter, reduced susceptibility to viral infections, reduced inflammation, and reduced risk of death in elderly patients. Vitamin D levels



are influenced by age, race, vitamin D intake, age, body fat, geographic location and sun exposure. As we age, our skin is less efficient in the production of vitamin D. Vitamin D deficiency is thus more common in people who are 60 years or older. People with more skin pigmentation (darker skin) have less Vitamin D production after sun exposure. Although “normal” 25-vitamin D levels are often defined as levels of 30 ng/ml or greater, there is considerable controversy as to what defines vitamin D deficiency and vitamin D insufficiency. The American Association of Clinical Endocrinologists (AACE) recommends goal 25-vitamin D levels of 30-50 ng/ml. There is considerable controversy regarding what level of D intake is required to maintain these levels, as well as what are the ideal levels for vitamin D. It may be that different levels of vitamin D are required for different functions (i.e. bone health vs. cancer). Optimal vitamin D levels may also vary among people. Adults 70 years and older require at least 800 IU/day of vitamin D for bone health and fall prevention ;at least 1500 to 2000 IU/day of supplemental vitamin D was recommended to keep 25(OH)D levels above 30 ng/mL in this group. Since vitamin D is fat soluble, it should be taken with a snack or meal containing fat.

#### **L16. The conundrum with healthcare reform in the US: Challenges and opportunities locally and on the global Scene”.**

**Alpesh Amin, Department of Medicine, University of California, Irvine, Irvine, CA**

Many changes are anticipated with US healthcare reform that will lead to a great deal of challenges and opportunities on the locally and have potential impact on the global scene. This talk will describe the changes occurring with healthcare reform in the US. Describe the challenges and opportunities and its impact on the global scene. Furthermore, discussion on the impact on healthcare providers, quality of care and economics will also be discussed.

## **II. Free communications.**

### **A. Oral Communication (OC1-C8),**

**OC1. EEG monitoring in the intensive care unit at Hamad Medical Corporation: a 3-year study. B. Mesraoua, D. Deleu, H. Al Hail, B. Uthman, L. Streletz, A. Faysal, A. Gayane**

**Neurophysiology Department, Hamad Medical**

### **Corporation, Doha, Qatar**

This study reports the preliminary results of a 3 year-QNRF Research Grant regarding the Continuous EEG (cEEG) monitoring in order to detect Non-Convulsive Seizures/ Status Epilepticus (NCSs, NCSE) in patients with altered mental status in the intensive care unit (ICU). Rationale: .Evaluation of causes of altered mental status •Monitor brain activity in paralyzed patients •Detect subclinical seizures •Determine if there is progressive cognitive or outcome changes in NCSE and Periodic Discharges using outcome scales, MRI. MRS and Neuron-Specific Enolase (NSE) •Follow the progress in treatment of status epilepticus/ Periodic Epileptic Discharges (PLEDs) Results •170 ICU’s patients were included in this study; among those patients 80 patients(47%)showed EEG features compatible with NCSE/NCSs;the epidemiology of NCSE in this geographic area comparing to others part in the world, the clinical data, the EEG features, as well the progressive cognitive and outcome changes in patients with NCSE and Periodic Discharges using outcome scales, MRI, MRS and Neuron-Specific Enolase as a marker of brain inflammation ) will be discussed

### **OC2. Protocol driven stroke ward registry results in increased rate of thrombolysis in acute stroke care.**

**N. Akhtar, S. Kamran, D. Delu, P. Bourke, S. Joseph, M. Santos, A. Shuaib**

**Neurophysiology Department, Hamad Medical Corporation, Qatar**

Background and aim: Randomized controlled trials have demonstrated the efficacy of some specific processes of care in relation to stroke outcomes, including admission to specialized stroke units and use of thrombolysis, antiplatelet drugs, and oral anticoagulants for selected patient groups. However, the effectiveness of specific care processes in improving overall performance remains uncertain. The objective of our study is to evaluate whether a protocol driven stroke ward care improves the rate of thrombolysis given to acute stroke patients. Methods: Thrombolysis is started at our hospital since 2001. But the rate of intravenous thrombolysis given to patients with acute stroke remained very low. In last 13 years we were able to give thrombolysis to a total of 120 patients only, mainly because of lack of proper infrastructure, lack of understanding of general population of acute stroke symptoms, late arrival to emergency department, and concerns of bleeding related complications. Since 2013 we started developing a Registry based data collection



of all stroke patients, and built up updated protocols for acute stroke care. We also started a multidisciplinary Stroke Ward care, and with help of protocols started taking care of stroke patients. All data collected in a prospective web-based registry, which includes demographics, clinical, radiologic, and prognostic and performance measures. Results: In 2013 we admitted 765 patients with acute stroke, of which 255 (33%) presented with acute stroke. Only 4.5% of these patients received IV thrombolysis, with average door to needle time was 75 minutes. Since January 2014 with improved approach and protocol-driven care, we thrombolysed 8.8% of patients who presented with acute stroke. The average door to needle time was 61 minutes. Three patients developed asymptomatic hemorrhagic conversions, but there were no fatal hemorrhages. One patient later died because of sepsis. About 50% of these patients were discharged home, while 25% were sent to rehabilitation. About 55% of patients were discharged with a mRS of 2 or less, and 27% with mRS3. Conclusion: With Protocol based Multidisciplinary care through Stroke ward and Stroke registry helps in improvement of acute stroke care. It can lead to increase in thrombolysis rate, reduces thrombolysis related complications, improves prognosis, and increases awareness about stroke care not only in physicians and nurses but also in patients and their families.

**OC3. Prevalence of unrecognized diabetes mellitus: A prospective study in patients admitted with acute coronary syndrome.**

**W. Khaled, W. Dabdoub, A El-Bouzaidi, M. Khalil, A. Akkari, F. Al Kindi, A. Biou, M. Hussain, F. Allus, A. Sabry, A-A. Gehani. Dept of Cardiology, Heart Hospital, and Dept of Medicine, H. M. C, Doha, Qatar**

Background: Individuals with diabetes mellitus (DM) are at higher risk of coronary artery disease (CAD) and its complications. Many patients do not realize they have developed DM until they are admitted with acute coronary syndrome (ACS). There is an increasing interest in the prevalence of unrecognized diabetes among patients hospitalized to acute coronary care, as this may also have an implication on mortality and morbidity in this intriguing group of patients. Objective: We set out to investigate the prevalence of unrecognized diabetes and pre-diabetes in patients with ACS who are not known to be diabetic and as determined by elevated glycosylated hemoglobin (HbA1c) level, fasting plasma glucose (FPG) and or random plasma glucose (RPG), in line with the new International Guidelines. Methods: This is a prospective study that included 583 patients admitted with ACS,

without previous diagnosis of DM during one year period. RPG, FPG and HbA1c, as well as lipid profile were taken at the appropriate times. According to international criteria, patients were classified according to their diabetic status in to confirmed diabetics, Pre-diabetics, Non-diabetic or having Stress Hyperglycemia. Results: In the present study, the prevalence of abnormal glucose metabolism in ACS patients who were not known to have diabetes was 45 % (262 of 583 patients). Nearly half of these (123 of 262, 47%) had frank diabetes that they did not know about. Another 82 patients (31%) had pre-diabetes and 57 patients (22%) had stress hyperglycemia. These were 467 men and 116 women with a mean age of  $51.5 \pm 11.9$  years. The mean age for men was  $49.5 \pm 11.0$  years while the mean age of the women was  $58.7 \pm 13.6$  years ( $p < 0.01$ ). The means FBG was  $10.9 \pm 3.9$  in diabetics,  $6.7 \pm 1.5$  in pre-diabetics and  $7.3 \pm 1.4$  in stress hyper-glycemia. While HbA1c was  $8.7 \pm 1.9$ ,  $6.2 \pm 1.5$  and  $5.6 \pm 0.3$  respectively. Total, LDL and HDL cholesterol levels were not significantly different; however triglycerides were significantly higher in Diabetics and Pre-diabetics than non-diabetic group. Conclusions: Over one third of adult patients admitted with ACS and no previous history of DM had abnormal glucose metabolism, more than half of them had frank and unrecognized diabetes. These data raise alarm and should shape our clinical management, screening and prevention strategies of both DM and CAD.

**OC4. Racial differences at the time of referral to advanced congestive heart failure clinic**

**M. A. Alahmad, V. Master, A. Bitar, B. Alkhalili, K. Chatila, E. Birks, A. Lenneman, K. Mccants. Jewish Hospital Rudd Heart and Lung Center, University of Louisville, Louisville, KY, USA**

Objective: Advanced congestive heart failure (CHF) therapies (e.g. heart transplant and LVAD) have showed to improve the mortality and the quality of life of CHF patients. Studies showed controversial results about racial differences in response to such therapies. We hypothesized that African Americans are referred to the advanced CHF clinics so late that makes them do worse or do not make them candidates for advanced CHF therapies. Methods: We retrospectively reviewed all our outpatients in the period 2006 -2013. Demographic, laboratory, Echocardiography, right heart cath, insurance and referring physician data were collected on referral date. Results: Of 314 patients analyzed, 33% (104 patients) were AA while 67% (210 patients) were Caucasian. Other ethnicity groups were excluded (less than 1%). T and Chi-square test were used

to analyze continuous and binary variables respectively. There was no statistically significant difference between the two groups in age, sex, being referred by a cardiologist, SBP, tobacco or alcohol abuse. However, African American patients had higher BMI, DBP, non-ICM, HTN, DM. They were more likely to be on hydralazine and loop diuretics. Also, they had worse LVEF, LV diastolic and RV function. The pulmonary and ventricular pressures were also higher. Conclusions: Although some studies had showed that there is no racial difference in mortality following advanced CHF therapies, our experience showed that this is not the case. That's why African American patients with CHF are less likely to be candidates for LVAD and heart transplantation. More studies and clinical trials should be done.

#### **OC5. Satellite wireless 12 lead ECG transfers to the primary PCI center: Data from first nationwide primary PCI program for ST-elevation myocardial infarction.**

**AA Gehani, J. Al Suwaidi, A. Al Qahtani, S. Arafa, A. Arabi A, A. Nabti, S. Abujalala, I. Rafie, Magdi Yacoub. Heart Hospital, H. M. C, Qatar Cardiovascular Research Centre, Q.F. Doha, Qatar**

Introduction: Time is one of the most crucial factors in the success of Primary PCI (PPCI). We installed an advanced "Nationwide" Trans-Satellite Wireless ECG Transfer (W-ECG) network which enables swift identification of ST-Elevation Myocardial Infarction (STEMI) and allows direct transfer to the PPCI facility in Heart Hospital (HH), initiates the PPCI staff to get ready, and eliminates delayed transit in the Emergency rooms. Patients & Methods: Of 510 patients who had PPCI for STEMI, 282 (55%) were transferred directly to the Heart Hospital (HH). These were compared with 228 patients (45%) who went to other hospitals first (OH) before transfer to the HH. Age was similar 50.2 vs 50 years and there was no Ethnic difference (73% Asians and 26% Arabs) in both groups, but females were more in OH (6.2% vs 3.9%). We compared the two with regard to achieving the optimal Door to Balloon Time (DBT) of 90min for PPCI facility (HH), versus 120min for the OH group, as per guidelines. Results: The DBT was 53±23min for HH vs 104±55min in OH group (p<0.001). However, while 88% achieved <90min in HH group, only 70% achieved <120min in OH, p<0.001. Furthermore, out of hospital delay (delay until arrival to hospital) was also different. Patients who had W-ECG arrived faster and thus had shorter OHD to HH (198±183min) than those who used own transport to HH (287±276min). Likewise, for OH,

those brought by Ambulance had shorter DBT (100±40min) than by own transport (110±81min). Although OHD was in HH (216±212) than OH (201±172min), the combined OHD+DBT= (Total delay from symptoms to Balloon) was still shorter in W-ECG HH group (269min) than those going to OH (305min), thus saving 36 vital minutes. Although TIMI-0 flow on presentation was similar (HH 46% vs OH 44%), TIMI-III flow was achieved more often in HH (97%) than in OH group (92%). Peak Troponin (ng/ml) was greater in OH group (71251) vs (6576) in HH, p<0.05. Although Ejection fraction (EF) was similar, HH 45% vs OH 43%, in-hospital mortality was slightly higher in OH group (3.5%) vs (2.5%) in HH, p=0.5 and length of stay was longer in OH (4.3±4.7) compared to 3.4±3.1 in HH group, p=0.005. Conclusion: We have successfully installed a Nationwide Network for Trans-satellite wireless ECG transfer from the ambulance to the Heart Hospital. This offers significantly shorter Door to Balloon Times, total symptoms to balloon time, and length of stay, as well as lower peak Troponin and a trend towards lower in-hospital mortality.

#### **OC6. Qatar experience with hereditary breast/ovarian cancer high risk clinic (BOHRC)**

**S. Bujassoum Al Bader, H. Bugrein, R. Alassam, R. Al-Sulaiman. NCCCR, Hamad Medical Corporation, Qatar**

Background: breast cancer is the most common cancer in Qatar. The incidence rates increased from 45 per 100,000 in 2003-2007 to 56 per 100,000 in 2008-2011. The prevalent age group was 40-50 years old. Objective: To describe Qatar experience with (BOHRC), to detect incidence of HBOS, management of individuals within high-risk categories and to find out if there are any particular mutations related to BRCA1 and BRCA2 genes. Methods: Data collected from 20th of March - December 2013. Based on our guidelines, eligible women undergo detailed assessment including lifetime risk for developing breast cancer and genetic scoring. Using international scoring tools, patients who score  $\geq 10\%$  for BRCA1/2 mutations would be offered genetic testing or surveillance if life time risk is  $\geq 25\%$ . All cases are discussed in the multidisciplinary meeting to plan surveillance and risk reduction strategies. Results: 253 cases were seen in the (BOHRC), (78) patients were assessed by the genetic counselor and (42) high-risk patients were offered genetic testing. (21) were BRCA1 positive, (1) was BRCA2 positive, (6) had variant with uncertain significance and (2) had (3) variants with uncertain significance, (12) were BRCA1/2 negative. Remaining patients were either not eligible for genetic testing but with

an increased lifetime risk. Conclusion: The incidence of BRCA mutations exist in our population and contribute to the high incidence of breast cancer in younger age group.

#### **OC7. Awareness and understanding of disease among hospitalized cancer patients in Pakistan**

**K. Mushtaq\*, N. A. Jadoon, F. Usman Sulehri, N. A. Shair, M. Hussain, Muhammad Zubair. \*Department of Medicine, HMC, Qatar**

The objective of this study was to assess the awareness of cancer patients regarding their disease and to evaluate their understanding of disease and information seeking behavior. We enrolled 232 adult cancer patients for the study to collect data using semi structured interview regarding their awareness and understanding of illness. A majority of patients (87.8%) reported awareness of their diagnosis. Female patients, patients from urban areas, educated patients and those with longer duration of illness had significantly better knowledge of their disease as compared to the rest of the study group ( $p < 0.05$ ). Presence of metastatic disease did not significantly alter the patients' understanding of disease or their information seeking behavior. Age was found to significantly influence the understanding of current disease status and request for more information regarding disease. Most of the patients (82.2%) wanted their family to know about their diagnosis while a few (4.8%) wished their friends to have knowledge about their illness. Although the patients were more satisfied with care than the information they had received, awareness was not related to satisfaction ( $p > 0.05$ ). Most of the patients (71.0%) were not satisfied with the quantity and quality of the information they had received from their health care provider. Our findings suggest that although cancer patients want and need to have adequate information regarding their disease, the amount and quality of information they receive is not optimal leading to adoption of passive information seeking strategy causing misconceptions about disease.

#### **OC8. Standard breast cancer screening in Qatar.**

**S. Bujassoum , H. Bugrein , R. ALassam , M. Elmistiri. Department of Oncology, NCCCR, HMC, Qatar**

**Background and objectives:** Qatar has one of the highest age-adjusted breast cancer incidences in the Arab world BC incidence in Qatar was 52 per 100,000 in 2007-2011. The prevalent age group was 40-50 years old. This suggests that the age-specific incidence of breast cancer in Qatar is shifting more to a pattern usually not seen in Western nations where median age at diagnosis is 61 years of age, moreover the diagnosis is often at advanced stages of

breast cancer. These factors with reconfirmed evidence of mortality benefit from breast cancer screening trials, led to establishment the first mammographic breast cancer screening program in Qatar. The program accepts women at ages between 45-69 years and was launched in 2008. It adopted international standards of breast screening practice and breast cancer detection. **Methods:** This retrospective study to describe the breast cancer screening program in Qatar. **Results:** Total number of screened women was 4264 with an increasing participation, year by year. The age group of breast cancer detected cases from screening program (43-51). Total breast biopsies were 82 core, of which 45 were positive of breast carcinomas, (37) IDC (8) DCIS. The positive predictive value (PPV) was 46%. Sensitivity value has improved from 51% in 2008 to 70% in 2012 as well as specificity value that has increased from 77% in 2008 to 83% in 2012. **Conclusion:** Public acceptance of the breast cancer screening program gradually increased and detection rates were acceptable in this part of the world.

#### **B. Posters (P1-P24)**

##### **P1. Increased frequency of bacterial infection in patients with liver cirrhosis using acid suppressive medication: an experience of a single tertiary hospital in Qatar.**

**Abdel-Naser Elzouki<sup>1</sup>, Fatima A. Rasoul<sup>1</sup>, Nadia Nefati<sup>1</sup>, Muftah Othman<sup>1</sup>, Ali Saad<sup>1</sup>, Ahmed Badi<sup>2</sup>, Muna Al-Maslamani<sup>1</sup> Department of Medicine, <sup>1</sup>Hamad General hospital and <sup>2</sup>Alkhour Hospital, Hamad Medical Corporation, Doha, Qatar**

**Background/Aims:** The association between bacterial infections and acid suppressive medications (i.e., proton pump inhibitors, PPIs) has been recently studied with debatable results. The aim of this study was to investigate the relationship between PPIs and the development of bacterial infections in cirrhotic patients. **Material and methods:** Consecutive cirrhotic patients above 18 years old hospitalized from 2007 through 2012 to Hamad General Hospital-Qatar were enrolled. Specifically inquired for PPIs consumption in the last 90 days prior to hospitalization and classify as PPIs-users and non-users. Cirrhosis diagnosis was established either with a liver biopsy or the combination of physical, laboratory and ultrasonography findings. Cirrhotic patients with active gastrointestinal bleeding, using immunosuppressive therapy or using antibiotics in the previous two weeks prior to hospitalization were excluded. **Results:** A total of 333 patients were included, 171 (51.4%) with and 162 (48.6%) without PPIs. The PPIs-users were significantly older in age ( $p = 0.001$ ). There was no statistical



difference between the two groups in sex distribution and etiology of cirrhosis ( $p > 0.05$  for both parameters). The PPIs-users had a significantly higher incidence of overall bacterial infection rate (25.7%) than non-PPIs-users (13.5%),  $p = 0.005$ . On the multivariate analysis, older age  $> 60$  years, (OR = 1.246, 95% CI 1.021-08.486;  $p = 0.02$ ), and PPIs-use (OR = 2.149, 95% CI 1.124-06.188;  $p = 0.01$ ) were independent predicting factors for overall bacterial infection. The indication for PPIs use was undocumented in 43% of patients. **Conclusion:** The present study shows that PPIs use, as well as older age  $> 60$  years, was an independent predicting factor for the development of bacterial infection in hospitalized cirrhotic patients. Unless it is indicated, PPI therapy should be avoided in this group of patients, in particular those with older than 60 years of age.

## **P2. Establishment of stroke ward results in immediate reduction of major complications.**

**N. Akhtar, S. Kamran, R. Singh, D. Deleu, P. Bourke, S. Joseph, M. Santos, A. Shuaib. Neurophysiology Department, Hamad Medical Corporation, Qatar**

**Background and Purpose:** Randomized controlled trials have consistently shown that stroke units decrease both mortality and morbidity compared with conventional care in general medical wards. There are however limited data on the specific types of in-hospital medical complications and their effect on outcomes. The objective of this study was to determine whether establishing a specialized geographically defined Stroke Ward results in reducing the major complications in patients suffering from acute stroke within the same hospital system. **Methods:** This is a prospective study from January 2014 till July 2014. Data was collected from a web-based stroke registry in two phases. In phase 1 (from January 1, 2014 till March 08, 2014), we collected data of stroke patients admitted at in the medical wards. In phase 2, a protocol-based multidisciplinary care Stroke Ward became operational where most of the patients were admitted. Outcomes measures were number and type of complications, mortality, discharge disposition, and length of stay, and were adjusted for age, sex, and medical comorbidities. **Results:** There were 130 admissions in phase 1 and 345 in phase 2. Commonest complications included, aspiration pneumonia 29% vs 12% ( $p < 0.001$ ) and pressure ulcers in 35% vs 11% ( $p < 0.001$ ). Average length of stay decreased from 12 days to 4 days ( $p < 0.001$ ). In phase 1, 70 % of patients were discharged home, while 23% were transferred to rehabilitation while in phase 2, 75% of patients were discharged home, while 18% patients were sent to rehabilitation. Ninety percent of complications

happened in medical wards, mainly in patients who over stayed in emergency department (more than 8 hours) waiting for bed in Stroke Ward or medical floor. **Conclusion:** A protocol based multidisciplinary care Stroke Ward care significantly reduces common early complications of acute stroke. It also helps in significantly reducing the length of stay, saving total bed days at a tertiary care hospital, hence improving the overall care of these patients.

## **P3. ERCP on a cohort of 759 cases: a 6-year experience of a single tertiary center in Libya.**

**Ali Tumi<sup>1</sup>, M Magadmi<sup>1</sup>, S. Elfageih<sup>1</sup>, A-Fatahajib<sup>1</sup>, M0 Azzabi<sup>1</sup>, Abdul-Naser Elzouki**

**Background:** To review the indications, findings, technical success and outcomes of endoscopic retrograde cholangio-pancreatography (ERCP) procedures in a large cohort of patients admitted to a single tertiary center in Libya. **Patients and Methods:** A total of 759 consecutive ERCP procedures were performed in 704 patients during January 2005 through December 2010 at the Endoscopy Unit of Central Hospital, Tripoli, Libya. Patient's demographic characteristics, clinical information, ERCP indications, laboratory parameters and post-ERCP complications were reviewed. Formal written consent was obtained from all patients prior each procedure. **Results:** There were 280 (36.9%) males and 479 (63.1%) females with mean age  $\pm$  SD of  $56.8 \pm 18.7$  years. Papillotomy was done in 670 (88.3%) cases of the ERCP procedures. Common bile duct (CBD) stones reported in 389 (51.3%) cases and were more frequent in females (234 cases, 60.1%) than males (155, 39.9%),  $p = 0.01$ . Most of the CBD stones were successfully retrieved with balloon extraction 304 (78.2%) while mechanical lithotripsy (67 cases, 17.2%) and dormin basket (11 cases, 2.8%) were used for difficult stones. Only seven (1.8%) cases were referred for surgery. Malignancy was found in 151 (19.9%) of the cases and was significantly more common in males than females (102, 67.5% vs. 49, 32.5%, respectively,  $p = 0.001$ ). Of them, stents for bile drainage were inserted in 26 (17.2%) of the cases. Complications encountered were acute pancreatitis in 30 cases (3.9%), minor bleeding in nine cases (1.2%), major bleeding in one case (0.15%), cholangitis in four cases (0.52%) and perforation in one case (0.15). Mortality was reported in three cases (0.4%). **Conclusion:** ERCP indications and related complications, in our center in Libya, are comparatively consistent with those reported data in other countries. Successful biliary cannulation was achieved in most of the patients and post-ERCP



complications were uncommon except for pancreatitis that has occurred more frequent.

#### **P5. Community-oriented program for the control of rheumatic disease (COPCORD) in Qatar.**

**Housam Aldeen Sarakbi, Mohammed Hammoudeh, Samar Al Emadi, Magdi Abdulrahman, Abdulrazzakh Poil, Ayah Ziadah, Hamad Medical Corporation, Doha, Qatar.**

**Objective:** Community Oriented Program for the Control of Rheumatic Disease (COPCORD) were done in many countries to estimate the prevalence of rheumatic disease, we conducted COPCORD in Qatar for ages 16 and above for Qatari National of both sexes. **Methods:** this is a cross sectional study with target of 1000 subjects, 500 males and 500 females. We conducted door to door survey using COPCORD Questionnaire (Arabic version) done by recruited research assistants, the subjects with positive surveys were called to Hamad General Hospital Rheumatology outpatient's clinics for further interview and diagnosis by Rheumatologists. **Results:** This is the preliminary results for 732 subjects. 483 males and 249 females, we have the following diagnosis: 28 subjects with knee osteoarthritis, 22 subjects with Low Back Pain, 8 subjects with cervical and lumbar disks, 7 with low vitamin D, 3 with shoulder pain and 2 with Rheumatoid arthritis. **Conclusion:** This is the first data in Qatar for prevalence of Rheumatic diseases, the prevalence rate of rheumatic diseases seems lower in Qatar than international figures, further data to come at the end of study.

#### **P6. Analysis of factors associated with development of hepatic encephalopathy in cirrhotic patients with upper gastrointestinal bleeding.**

**K. Mushtaq, N. A. Nauman, A. Jadoon, S. U. Khan, A. T. Hashmi Jadoon, S. U. Khan, Arsalan T Hashmi**

**Objective:** To evaluate demographic, clinical and etiological variables that would predict the development of hepatic encephalopathy (HE) in patients of decompensated cirrhosis (DC) with upper gastrointestinal (GI) bleed. **Materials and Methods:** 152 patients of DC with upper GI bleed (66.4% men; mean age  $5.22 \pm 13.27$  years) were classified into HE and without HE groups. Correlation with detailed demographic, prevalent co-morbidities, clinical, laboratory and prognostic (MELD score, CP class) indicators was assessed through Chi-square test. **Results:** Diabetes mellitus (DM) was significantly associated with HE (41.1%,  $P=0.01$ ). Clubbing was more common in patients without HE (11.5%,  $P=0.01$ ) whereas peripheral

edema was more prevalent in HE patients (56.4%,  $P=0.009$ ). As levels of AST and ALT gets beyond  $> 35$  IU, their association with HE becomes significantly stronger (AST: 95.7%,  $P=0.03$ ; ALT: 85.2%,  $P=0.006$ ). Same trends stand true for hyperkalemia ( $K > 5$  mM/L, HE=15.7%,  $P=0.04$ ). However, no statistically significant correlation was noticed between demographics, viral etiologies of chronic liver disease (hepatitis B, C) and other clinical and biochemical variables ( $P > 0.05$  for all). **Conclusion:** DM is significantly correlated with development of HE in patients of DC with upper GI bleed. With increasing severity of CP score, chances of HE development becomes significantly higher. Incremental levels of AST, ALT and hyperkalemia can predict HE development in setting of GI bleed related hypoxic injury.

#### **P7. The influence of social class on the adherence to dual anti-platelet therapy post Percutaneous Coronary Intervention (PCI) and the outcomes.**

**Ihsan Rafie, Syaaban Mohammed, Sabir A Karim, Fahd Al-Kindi, Abdul Rahman Arabi. Department of Cardiology, Heart Hospital, Doha, Qatar.**

**Aim:** The aim of this study was to test the hypothesis that the patients in the low socio-economic class, probably due to financial reasons or level of education, are less compliant to dual anti-platelets therapy (DAPT) post PCI following episode of Acute Coronary Syndrome (ACS). **Methods and Results:** Methods: Consecutive patients who had PCI over a six-month period in the only tertiary Heart Hospital in Qatar were followed-up for eighteen months. The adherence to DAPT was determined by the prescription refill post discharge. Our institutional and national policy dictated the minimum duration of DAPT was for 12 months. Therefore, the patients who did not renew the prescription through our hospital will not be able to receive it elsewhere. We compared the prescription renewal between the high (Group 1) and the low (Group 2) social class groups (primary endpoint). Readmission rates and mortality were also recorded (secondary endpoints). **Results:** Five hundreds fifty-seven patients were included. There was no difference in the composition of male gender between the high and the low social class groups (83.6% Vs 87.5%,  $p=0.19$ ). At 2 months post-discharge, there was no significant difference in the adherence to DAPT in both groups (Group 1=78%, Group 2=83%,  $p=0.13$ ). At 12 months, there was significantly less compliant in Group 2 (70.4% Vs 80%,  $p=0.009$ ). For secondary endpoints, Group 2 displayed lower readmissions rate over 18 months (21%

Vs 31.5%,  $p=0.005$ ), higher mortality at 6 months (3.3% Vs 0.7%  $p=0.026$ ) but lower at 18 months (1.1% Vs 3.5%,  $p=0.062$ ). **Conclusions:** Low social class is associated with non-adherence to full course of 12 months of DAPT and higher 6 months mortality post-angioplasty. Further study is required to determine the higher re-admission rate and 18 months mortality in the high social class.

#### **P8. Community-acquired pneumonia assessment at Cuban hospital 2013.**

**T. R. Fernandez and A. D. Perez. Department of Medicine, Cuban Hospital, Dukhan, Qatar**

**Background:** Hamad Medical Corporation has a clinical protocol in community-acquired Pneumonia since 2007 to provide practical guidelines to doctor and nurses for the management of patients presenting with pneumonia and an assessment tool to decrease the variation in care of such patients. **Objective:** To assess community-acquired pneumonia protocol at Cuban Hospital. **Materials and Methods:** We reviewed the total of files of patients presented with community-acquired Pneumonia from May to November 2013 at Cuban Hospital. According to the assessment tool data were collected monthly in a Microsoft Excel database. Table, graphic and text boxes were done. **Results:** A total of 19 patients were studied. Majority of them were younger than 50 years and males. Diabetes Mellitus as the co-morbidity more found in-between them. Chest x-ray was done to all cases. Renal function test was done in almost totally but not microbiology investigation. Pneumonia PORT score was determined in a great percent of the patients and antibiotic given according to this. A few patients were admitted due to associated co-morbidities. **Conclusion:** Patients diagnosed with pneumonia at Cuban Hospital were evaluated, investigated, classified and treated according to the Community-acquired pneumonia clinical protocol.

#### **P9. Former instructions and perception on professionalism among trainees in multi-cultural, institution in Arabian Gulf, Qatar.**

**Abdul Naser Elzouki<sup>1</sup>, Amal Khidir<sup>2</sup>, Khalid Alyafei<sup>3</sup>, Ahmed Al Hammadi<sup>3</sup>, Magda Wagdy<sup>3</sup>, Abdul-Latif Alkhal<sup>1</sup>. Departments of <sup>1</sup>Medicine and <sup>3</sup>Pediatrics, Hamad General Hospital, Hamad Medical Corporation, Qatar, and <sup>2</sup>Weill Cornell Medical College, Qatar**

**Background:** Hamad Medical Corporation, a highly dense multi-cultural Academic Health Center in Qatar, recruits faculty and trainees from different cultural and medical

education background. Moreover, it has recently received the Accreditation Council for Graduate Medical Education-International (ACGME-I). Professionalism as one of the six core competencies required by the ACGME-I, assessment of the trainees in this aspect is essential, however, with the diverse background it was necessary to evaluate their exposure to professionalism teaching and perception to inform the development of an adapted curriculum and assessment tools. **Objectives:** The purpose of the study was to evaluate the trainees': a) exposure to teaching, b) perception, c) interest to learn and the preferred methods and d) interest to receive feedback and how frequent, of professionalism in a multicultural medical academic institution in Qatar. **Methods:** All enrolled trainees (575, residents and fellows) at Hamad Medical Corporation, Qatar in the academic year 2012-2013, were surveyed during the period of September 2012 to May 2013. This included all the trainees in the hospital who are from 17 disciplines (i.e., medicine, surgery and its subspecialties, pediatrics, obstetrics and gynecology, anesthesia, ophthalmology, orthopedics, psychiatry, family medicine, emergency medicine and radiology). They were invited to complete an 11-question survey before they attend the one-day mandatory professionalism course. A total of 12 courses were instructed to accommodate the total number of trainees. **Results:** A total of 459 trainees from >27 different nationalities and >28 different medical schools completed the survey, response rate 80%. They were 56% males and 44% females. Overall 75% of participants expressed lack of professionalism teaching in their undergraduate study. Responsibility, respect, honesty and patient confidentiality were perceived as highly important physician attribute in work place compared to, altruism, compassion, interpersonal competence and team-work. Positive role model and regular professionalism workshops during their training were perceived as the most useful methods for learning about professionalism. Nearly 85% of responders liked to be evaluated and receive monthly feedback on their professionalism behavior during their training. **Conclusion:** Although the perceptions of the studied multicultural group of trainees about the important physician attributes were sound and reasonable still there is clearly a lack of formal professionalism teaching in their undergraduate education. Their interest to receive teaching might help in changing minds and behaviors upon the delivery of a culturally adapted curriculum and the development of the assessment tools. The enthusiasm to be evaluated and receive feedback will further inform the faculty development curriculum.

### **P10. Tailoring Morning Reports to an Internal Medicine Residency in Qatar.**

**K. Dousa, A. Al-Mohammed, D. Al Mohanadi, M. Muneer, A. Rahil, A. Elhiday, A. Hamad, B. Albizreh, N. Suliman, S. Muhsin. Department of Medicine, Hamad Medical Corporation, Doha, Qatar.**

**Objective:** Our intervention was aimed at enhancing the format for morning report in our internal medicine residency program in Doha, Qatar. **Intervention:** In July 2011, we performed a needs assessment of the 115 residents in our internal medicine residency program, using a questionnaire. Resident input was analyzed and prioritized using the percentage of residents who agreed with a given recommendation for improving morning report. We translated the input into interventions that enhanced the format and content, and improved environmental factors surrounding morning report. We resurveyed resident using the questionnaire that was used for the needs assessment. **Results:** Key changes to the format for morning report included improving organization, adding variety to the content, enhancing case selection and the quality of presentations, and introducing patient safety and quality improvement topics into discussions. This led to a morning report format that is resident-driven, and resident-led, and that produces resident-focused learning and quality improvement activities. **Conclusions:** Our revised morning report format is a dynamic tool, and we will continue to tailor and modify it on an ongoing basis in response to participant feedback. We recommend a process of assessing and reassessing morning report to other programs that want to enhance resident interest and participation in clinical and safety-focused discussions.

### **P11. Six cases of new onset refractory status epilepticus (NORSE) syndrome: outcomes with early immunotherapy.**

**S. Elmaki, G. Melikyan, D. Deleu, D'souza<sup>1</sup>, N. Akhtar, F. Ibrahim, H. Alhail, B. Mesraoua, N. Haddad. Neurophysiology Department, Hamad Medical Corporation, Qatar**

**Background:** Here we present a series of 7 patients with Cryptogenic new onset refractory status epilepticus NORSE syndrome treated at Hamad Medical Corporation, in whom early use of immunotherapy associated with good neurological outcomes. **Methods:** Case note review of the index case and six other patients was undertaken to obtain details of clinical presentation, imaging and

CSF findings, infectious/inflammatory tests, management of seizures, immunotherapy and outcome. **Results:** Previously healthy 45-year-old man presented with episode of abnormal behavior and confusion on the background of 3-days history of fever, malaise. He was loaded with intravenous Phenytoin. Next day after admission patient developed status of generalized tonic-clonic seizures. He was intubated, started on Midazolam followed by Propofol IV infusion. Patient continued to have breakthrough seizures, despite multiple anticonvulsant medications. CSF examination and serological tests for viral and autoimmune etiologies were normal. IV immunoglobulin was administered day 20 with good recovery. Clinical features and investigations of the six other patients were similar. Five patients were given early immunotherapy with steroids and intravenous immunoglobulins. Three of them improved without neurological deficit, another two, survived with moderate degree of neurological deficit. Two patients who were not given immunotherapy, died. **Conclusion:** Early immunotherapy has been associated with good outcomes in NORSE. Multicenter collaboration is required to establish the diagnostic criteria and appropriate management.

### **P12. Clinical features and epidemiological links of three MERS-CoV infection cases in Qatar.**

**A. Alkhal, M. Almaslamani, S. Aldahry, N. Elmakki, S. Hashim, K. Chacko, K. Dousa. Division of Infectious Diseases, Department of Medicine, Hamad General Hospital, HMC, Qatar**

**Background:** We reported three Qatari patients who were admitted to HGH in August, 2013 diagnosed later with MERS-CoV. The viral sequence of the cases revealed same viral genome; that raised the possibility of human to human transmission leading to a small cluster of cases. **Cases Presentation:** Patient A had history of recent travel to Saudi Arabia and contact to a confirmed case of MERS-CoV at hospital in Al-medina. He presented to Hamad General Hospital on August 15<sup>th</sup>, 2013 with lobar pneumonia and tested positive for MERS-CoV on August 19. Thereafter, patient completely recovered and discharged. Patient B visited HGH emergency three times between August 17<sup>th</sup> and 18<sup>th</sup> with bronchial asthma. On 19<sup>th</sup>, admitted with MERS-CoV pneumonia and multi-organ failure; patient expired on September 6, 2013. Patient A and patient B shared the room from 17<sup>th</sup> to 19<sup>th</sup> of August and were in opposite beds for 4 hours. Patient C seen in HGH emergency room for 1 day on August 18<sup>th</sup>, 2013 with minor trauma and after five days patient presented with severe pneumonia and ARDS secondary to MERS-CoV infection. Patient C expired on



August 31<sup>st</sup>, 2013

**Conclusion:** Here, we describe a small cluster of secondary and possibly tertiary cases of MERS-CoV infection as proven by the full viral genome sequence (with more than 99.9 % similarity) where transmission of infection likely occurred in a healthcare setting. However, the Qatari cluster sequences are closely related to genetic sequence (KSA).

**P13. Testosterone supplements, anabolic steroids, smoking and acute myocardial: Case report with review of literature.**

**K. Khan and A. A. Gehani, Department of Cardiology, Heart Hospital, and Dept of Medicine, H. M. C, Doha, Qatar**

**Background:** Use of dietary and nutritional supplements to improve athletic performance is common amongst athletes/military personals. Serious cardiovascular adverse effects related to their use have been reported, including sudden death. Although the potential risks of cardiovascular events are many, there are only a handful of case reports and clinical observations in the current literature, suggesting an association of intracoronary thrombosis, sudden death, myocardial necrosis, stroke and cardiomyopathy as a possible sequelae of anabolic steroid abuse. In addition, testosterone, due to its use in treatment of reduced muscle mass and bone density is commonly used amongst body builders.

**Case Report:** We report a rare case of acute ST-segment elevation myocardial infarction, in a young heavy weight trainer, who had recently started using anabolic steroids and testosterone and were also a smoker. The patient underwent successful percutaneous intervention of the posterior descending artery. He was finally discharged on standard medical therapy for acute myocardial infarction which included aspirin, statin, beta blocker and an angiotensin converting enzyme inhibitor. **Conclusion:** There is a crucial need for raising awareness about the life threatening consequences of anabolic steroid abuse among physicians and patients.

**P14. Slow pseudo-periodic lateralized epileptiform discharges in no convulsive status epileptics in a patient with cerebral palsy and a large central meningioma: a case report.**

**Y. Imam, D. Deleu, B. Mesraoua, A. D'souza, H. Al Hail, P.W. Kaplan. Neurophysiology Department, Hamad Medical Corporation, Qatar**

**Background:** The presence of cerebral palsy and slow

growing brain tumors are risk factors for convulsive and non-convulsive status epilepticus. No convulsive status epilepticus (NCSE) needs electroencephalographic (EEG) monitoring to be confirmed as it may be clinically subtle. Furthermore it may present in a variety of ictal EEG morphologies. We report a case in a patient with cerebral palsy and a large central meningioma. EEG showed a slow pattern of periodic lateralized epileptiform discharges (PLEDS) on an alpha background. The patient was treated as a NCSE. **Case Report:** 49-year-old male known to have cerebral palsy, mental retardation, and epilepsy for the last 10 years developed a seizure followed by fluctuating level of sensorium. His EEG showed a slow pattern of periodic lateralized epileptiform discharges (PLEDS) on the background of alpha activity. Brain CT scan revealed a large central meningioma with surrounding edema. He was treated successfully with benzodiazepines followed by up titration of his antiepileptic drug doses. **Conclusion:** Clinical manifestations of NSCE are often subtle and a high level of suspicion is needed for the diagnosis and EEG Monitoring is therefore recommended. Although controversial, PLEDs are borderline EEG patterns that can be considered as NCSE in the right clinical setting.

**P15. Atypical presentation of subclavian steal syndrome.**

**L. El-Sheikh. Department of Medicine, Hamad General Hospital, Hamad Medical Corporation, Qatar**

**Background:** Stroke is one of the major causes of morbidity and disability in elderly population. Although hypertension, diabetes and dyslipidemia considered as major risk factors, in their absence will not rule out the other risk factors for stroke. The term subclavian steal has been used to describe retrograde blood flow in the vertebral artery associated with proximal ipsilateral subclavian artery stenosis or occlusion. This phenomenon may occur when the subclavian artery is occluded proximal to the origin of the vertebral artery. Although retrograde blood flow in the vertebral artery associated with ipsilateral subclavian artery occlusion is not unusual, neurological symptoms following ipsilateral arm exercise in this setting are uncommon. Most patients with significant arterial occlusive lesions in the proximal subclavian artery are asymptomatic; therefore, the term Subclavian Steal Syndrome is reserved for those patients who develop neurological symptoms as a consequence of brain ischemia that occurs during or immediately following exercise of the ipsilateral arm. **Case Report:** We present a 68-year male patient brought to the emergency after his fall down following a syncopal attack. His clinical examination was remarkable for absent left radial pulse with significant



difference in brachial blood pressure between the two arms. Left Subclavian Steal Syndrome was suspected which was proved by carotid Doppler ultrasound showing fro type directional flow on the left vertebral artery. This patient represents atypical case of symptomatic subclavian steal syndrome which was clinically suspected in the presence of syncope, diminished ipsilareral pulse and blood pressure. **Conclusion:** Subclavin steal syndrome is a known cause of transient vertebrobasilar insufficiency which could mimic transient ischemic attack or transient arrhythmias, so it is important to check both arm pulses and blood pressure for any patient presented with syncope. It is very crucial to identify this syndrome early to decide the plan of intervention and decrease the possibility of serious injuries as those patients had high risk of falls. The choice of intervention (surgical, endovascular) depends upon the patient's specific anatomy, the presence of concomitant ipsilateral carotid disease, and the patient's overall medical status.

**P16. Aseptic meningitis in immunocompetent patient caused by Varicella Zoster reactivation with no rash and increased intracranial pressure.**

**W. Ibrahim, A. A. Husain, A-N Elzouki. Department of Medicine, Hamad General Hospital, HMC, Qatar**

**Background:** Neurologic complications can occur with Varicella Zoster Virus (VZV) infection, usually after vesicular exanthem. **Case Report:** We report a case of a previously healthy 15-year-old girl with aseptic meningitis as a result of reactivated-VZV infection with symptoms of increased intracranial pressure and reversible 6<sup>th</sup> cranial nerve palsy but without exanthem. Diagnosis was made by detection of VZV-DNA in cerebrospinal fluid (CSF) using PCR and documented high intracranial pressure in the CSF examination. Full recovery was achieved after a course of acyclovir and Acetozolamid. **Conclusion:** This case demonstrates that VZV may be considered in cases of aseptic meningitis in immunocompetant individual even without exanthem. It may increase the intracranial pressure, leading to symptoms, and causes reversible neurological deficit.

**P17. Seizures and acute kidney injury (AKI) are associated with synthetic cannabinoids abuse.**

**M. A. Alahmed, C. Patel, H. Ayash, E. Lederer Jewish Hospital Rudd Heart and Lung Center, University of Louisville, Louisville, KY, USA**

**Background:** Although there have been few prior reports of AKI and seizures in association with synthetic cannabinoid

abuse, reports of synthetic cannabinoids abuse are growing particularly among male adolescents, to some effect because it is legal and not detected in most urine toxicology screens. These cannabinoids, also known as "spice" or "K2", are associated with hallucinations and seizures. AKI has also been reported. **Case Report:** Herein, we report a case of a young male who had seizures and acute kidney injury after using "SPICE". Given increased usage of these synthetic cannabinoids, better social histories must be obtained especially form vulnerable age groups. This may help detect more synthetic cannabinoid use at more patients in these younger age groups who present with seizures and/ or AKI.

**P18. Nonsurgical repair of heart ware driveline plug in stable patient with non-operating VAD for 16 hours.**

**M. A. Alahmed, K. Chatila, E. Birks. Jewish Hospital Rudd Heart and Lung Center, University of Louisville, Louisville, KY, USA**

**Background:** The number of Ventricular Assist Device (VAD) implantations, most commonly with HeartmateII or Heartware devices, as a therapy for advanced heart failure patients has increased recently especially after Food and Drug Administration (FDA) approval. However, VAD system dysfunction is one of the potential complications. An example is a driveline or percutaneous lead damage. The driveline is a cable that passes through the skin and connects to the implanted pump and to the external VAD system components. **Caser Report:** We present a case report of a VAD patient admitted for non-operating Heart Ware due to innocent trauma to the driveline in home. The patient was totally stable, alert and orient for around 16 hours before technicians were able to replace the damaged part of the driveline. Although many reports about repairing the driveline of heart mate II system nonsurgically have been published, we believe that this is the first report presenting replacing part of a damaged driveline of Heartware system nonsurgically in totally non-operating Heartware device since it typically surgically managed.

**P19. Sjogren syndrome presents with rash, muscle aches and severe hypokalemic weakness.**

**M. A. Alahmed, C. Patel, H. Ayash, E. Lederer. Jewish Hospital Rudd Heart and Lung Center, University of Louisville, Louisville, KY, USA**

**Background:** Sjogren syndrome is an autoimmune lymphocytic infiltrate in (exocrine) glandular and

extroglandular organs, so although it typically manifests with xerophthalmia, xerostomia and parotid gland enlargement, the syndrome may also involve central nervous system, skeleton and/or the kidneys. In the literature, the syndrome affects the kidney in 4-50%, usually by causing interstitial nephritis. Only 11.3% of patients with this syndrome develop type 1 RTA which causes hypokalemia. However, complicated hypokalemia by paralysis or even central pontine myelinolysis is rare; more than forty cases of periodic paralysis have been reported since 1966. **Case Report:** We herein report a case of elderly lady presenting with rash and hypokalemic paralysis due to type 1 RTA in Sjogren's syndrome. The rash was maculopapular with some tiny papules. It is spread to the whole body. The rash, as the first presenting symptom, is unique to our report. **Conclusion:** Hypokalemia due to type 1 RTA in Sjogren syndrome may be severe enough to cause quadriplegia. Physician should be aware of such serious manifestation even if the patient is a child and/or has no classical sicca symptoms.

**P20. Streptococcus G infection in a dog owner with Heart mate II LVAD presenting with blurred vision and lightheadedness.**

**M. A. Alahmed, A. Kutmah, E. Birks, K. McCants. Jewish Hospital Rudd Heart and Lung Center, University of Louisville, Louisville, KY, USA**

**Background:** Although LVAD implantation improves functional capacity and quality of life in patient with advanced heart failure, infection is the most common complication (25-80%). This is the first case report of Streptococcus G infection in a dog owner with an LVAD (Left Ventricular Assist Device). **Case Report:** A thirty-six year-old Caucasian male was admitted to Jewish Hospital with nonspecific lightheadedness and blurry vision. He had two erosions from bite of his dog one week ago and the blood culture showed growth of *Streptococcus* group G. Although *Streptococcus G* is a flora of human skin, oropharynx, and gastrointestinal and female genital tracts, it occasionally causes severe diseases such as endocarditis and sepsis. One of the subspecies, *S. canis*, could cause sepsis in dog owner particularly with a bite. **Conclusion:** We herein advise LVAD patients to be careful during close contact with dogs to prevent such infection.

**P21. Asthma Lusoria: right aortic arch with aberrant left subclavian artery (Lusorian artery) masquerading as severe asthma: Case report and a review of the literature.**

**H. Mobayed, M. Al-Marri, N. Al-Marri. Division of Pulmonary Medicine, Department of Medicine, Hamad General Hospital, HMC, Qatar**

**Background:** Asthma is chronic inflammatory disease of the airways which is considered the most common chronic diseases that present as dyspnea and wheezing. However not every wheezing is asthmatic as other health conditions may have symptoms that may mimic asthma symptoms.

**Case Report:** This paper present the first case report in Qatar of young lady presented with asthma since childhood resulting from Asthma lusoria caused by a right aortic arch with a diverticulum (of Kommerell) at the origin of an aberrant left subclavian artery (Lusorian artery) and persistence of ligamentum arteriosum (LA) followed by a review the literature.

**P22. Innominate vein compression syndrome in patients with aberrant right subclavian arteries: Report of two cases and review of the literature.**

**M. Al-Marri. Division of Pulmonary Medicine, Department of Medicine, Hamad General Hospital, HMC, Qatar**

**Background:** The term "innominate vein compression syndrome" was first recognized by Wurtz et al. In 1989.

**Case Report:** We report two cases of left innominate vein compression associated with an aberrant right subclavian artery, the most common aortic arch anomaly after the bovine arch (anomalous origin of the left common carotid artery from the innominate artery). Neither of the two patients had a history of trauma, surgery, or intervention that may have altered the anatomic relationship between the aortic arch and great vessels with the innominate vein.

**P23. Primary adrenal and gonadal failure with anti-phospholipid syndrome.**

**H. Rashid, A. Salama, Ramshad, S. Arroub, S. Omar, S. Farook. Department of Medicine, Hamad General Hospital, HMC, Qatar**

**Background:** Primary adrenal insufficiency in antiphospholipid syndrome is usually caused by

haemorrhage or vascular occlusion. **Case Report:** We report this case without any evidence of Adrenal haemorrhage or infarction with coexistent gonadal failure. An Indian male aged 37, presented with a 10 day history of breathlessness, fatigue, facial and bilateral lower limb swelling. A year ago he was diagnosed Antiphospholipid syndrome following an unprovoked DVT. He had stopped his compliance to warfarin two months back. On examination he was hypoxic, tachycardic and tachypneic. He had diffuse facial swelling and some scattered petechiae along with generalised hyperpigmentation. CTPA showed bilateral segmental pulmonary embolus and an SVC Thrombus. Anticoagulation was reinitiated. -Short Synacthen test: 0 mins–35nmol/L, 30 mins–152 nmol/L, 60 mins–205 nmol/L -TSH=14.41 (0.45 – 4.5Miu/l), free T4=15.1 (9-20 pmol/l) -Anti-thyroid peroxidase antibody=959U (positive > 100 U) -Testosterone =4.78 [10.4 – 35 nmol/L], LH =30 [1 – 9 IU/L], FSH =22 [1 – 19 IU/L] -Somatomedine-C =59[96.4 – 227.8 ng/ml] -Prolactin =80 [73-407 Miu/l] Elevated FSH, LH and TSH points against a pituitary cause for the adrenal insufficiency. Hydrocortisone and Testosterone therapy was initiated. MRI abdomen revealed no evidence of adrenal haemorrhage and only diffuse enlargement of the both adrenal glands. **Conclusion:** This case highlights coincidence of multiple primary glandular insufficiency in antiphospholipid syndrome without evidence of local vascular compromise. Elevated thyroid peroxidase antibodies could point towards a coexisting auto-immune phenomenon.

#### **P24. Filariasis: an atypical presentation.**

**A. Athreya, A. Al-Hammadi, O. Salameh, M. Barakat, R. El-Hassan, S. Farook.** Department of Medicine, Hamad General Hospital, Hamad Medical Corporation, Qatar

**Case Report:** A 38 year old Indian male was admitted with five day history of fever, shortness of breath and an abscess over right thigh. He reported a small forearm abscess which drained pus spontaneously and healed two months ago. On examination, he was febrile at 39.0\*c, no lymphadenopathy or ankle edema. Systemic examination revealed a possible pericardial rub and reduced breath sounds bi-basally. Genitourinary exam was normal. Local examination of the thigh revealed a 4x4cm abscess, which on ultrasound was positive for 'Filarial Dance' sign. The abscess was drained. Pus cultures grew Methicillin-sensitive *Staphylococcus aureus*. Imaging of the chest showed bilateral pleural effusion and mild to moderate pericardial effusion. Peripheral smear for microfilaria

was negative. Two sets of blood cultures were negative and Transthoracic and transesophageal echo revealed no vegetations. Treatment was initiated for presumed staphylococcal endocarditis and Filariasis with Intravenous Flucloxacillin along with Ivermectin, Albendazole (stat) and diethylcarbamazine. The patient continued to spike fevers every evening despite this. Fine needle aspiration cytology of the pus from the abscess picked up a single microfilaria of *Wuchereria bancrofti*. Treatment continued with Diethylcarbamazine (10 days) and Doxycycline (6 weeks). After day 12 the fever spikes settled. **Conclusion:** This case illustrates a radically different presentation of *W. bancrofti* infection as a localized abscess and serositis as compared to conventional presentation of lymphangitis and lymphedema. Clinicians and radiologists should have a high index of suspicion when a patient from endemic area presents with unexplained abscesses.