

that: depend on the caregivers' side, are patient dependent, relate to the health care system and available services and some cultural aspects. Addressing these gaps may require further collection of data, construction of needed services for conservative management and education of the caregivers and the patients. ●

## VENOUS THROMBOEMBOLISM DURING PREGNANCY AND THE PUERPERIUM – WHO? WHEN? AND HOW TO TREAT?

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Venous thromboembolism (VTE) is a potentially life-threatening medical condition during pregnancy and the puerperium. During pregnancy, the risk of VTE is increased four to tenfold compared to non-pregnant women of comparable age. The risk is even higher in the puerperium. Physician awareness followed by adequate treatment may reduce the number of events. The most important risk factors are previous VTE or thrombophilia, although other acquired risk factors may result in similar impacts. Treatment is based on personalized risk assessment at the first patient visit during pregnancy, followed by repeated assessment of complications or at admission and final assessment at delivery. Hydration and mobilization are advised for all women. Pharmacological prevention by low-molecular-weight heparin (LMWH) is advised based on risk stratification. International guidelines differ by indications and range of management options. The purpose of this review is to summarize our knowledge on risk factors for VTE during pregnancy and puerperium and guide management options. ●

## MINIMALLY INVASIVE GLAUCOMA SURGERIES

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The goal of all glaucoma surgery is to lower eye pressure to prevent or reduce damage to the optic nerve. Standard glaucoma surgeries – trabeculectomy, ExPRESS shunts and external tube-shunts like the Ahmed and Baerveldt valves - are major surgeries. While they are very often effective at lowering eye pressure and preventing progression of glaucoma, they have a long list of potential complications. Minimal invasive glaucoma

surgery (MIGS) is a group of operations that have been developed in recent years to reduce some of the complications of most standard glaucoma surgeries. MIGS procedures work by using microscopic-sized equipment and tiny incisions. The purpose of this study is to review the available MIGS currently in use, their benefits and limitations. ●

## HIGH VOLTAGE ELECTRIC INJURY: MECHANISM OF INJURY, CLINICAL FEATURES AND INITIAL EVALUATION

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Electrical injury is an infrequent but potentially devastating form of multisystem injury associated with high morbidity and mortality. Despite significant improvement in injury prevention and implementation of safety protocols at work places, electrical injury accounts for more than 500 deaths per year in the United States with a mortality rate of 10-30%. Electrical injuries are traditionally divided into low-voltage electric power injuries (less than 1,000V) and high-voltage) more than 1,000V).

In contrast with other types of trauma, high voltage injuries present some rather unique problems that require a high index of suspicion and awareness of all possible manifestations.

Electrical injury should be viewed and managed as a multisystem injury, since there is virtually no organ that is protected against it. The most essential concept of successful management of patients who sustain high voltage injury is that there is no relationship between skin burn, vital organs involvement and severity of injuries.

This review aims to provide a comprehensive overview of reported high voltage electrical injury manifestations in an attempt to gain a better understanding of the distribution of morbidity and clinical features of the injury. We tried to encompass most of the reported cases of high voltage electrical injuries in order to give the readers a general view of the spectrum of injuries that can be encountered in victims suffering high voltage current, aiming to increase the awareness of emergency care and trauma teams to this rare but dangerous and potentially fatal type of injury. ●

goal. We compared characteristics and short- and long-term mortality of PPCI-treated STEMI patients admitted directly to the CCU with those admitted via the emergency department (ED).

**Methods:** To compare 303 patients admitted directly to the CCU (42%) with 427 admitted via the ED (58%) included in the current registry comprising 730 consecutive PPCI-treated STEMI patients.

**Results:** Groups were similar regarding demographics, medical history and risk factors. Pain-to-CCU time was  $151 \pm 164$  minutes (median-94) for patients admitted directly and  $242 \pm 226$  minutes (160) for those admitted via the ED, while door-to-balloon intervals were  $69 \pm 42$  minutes (61) and  $133 \pm 102$  minutes (111), respectively. LVEF evaluated during admission ( $48.3 \pm 13\%$  [47.5%] vs.  $47.7 \pm 13.7\%$  [47.5%]) and mean CK level ( $893 \pm 1157$  [527] vs.  $891 \pm 1255$  [507],  $p=0.45$ ) were similar between groups. Mortality was 4.2% vs. 10.3% at 30-days ( $p<0.002$ ), 7.6% and 14.3% at one-year ( $p<0.01$ ), reaching 12.2% and 21.9% at  $3.9 \pm 2.3$  years (median-3.5,  $p<0.004$ ) among directly-admitted patients vs. those admitted via the ED, respectively. Long-term mortality was 4.1%, 9.4%, 21.4%, and 16% for pain-to-balloon quartiles of <140 min, 141-207 min, 208-330 min, and >330 mins, respectively ( $p=0.026$ ).

**Conclusions:** Direct admission of STEMI patients to the CCU for PPCI facilitated the attainment of guidelines-dictated door-to-balloon time intervals and yielded improved short- and long-term mortality. Longer pain-to-balloon time was associated with higher long-term mortality. ●

## PREFERENCES OF PARENTS FOR PEDIATRIC INPATIENT WARD PHYSICIAN'S ATTIRE

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**Background:** The preferred attire for physicians has not been defined to date. In Israel, where casual attire is acceptable in most circumstances, patients' preferences have not yet been systematically evaluated.

**Methods:** This is a cross-sectional study that was designed to evaluate parents' preferences for physicians' attire in a pediatric inpatient ward. A volunteer was dressed in four types of clothes sets: elegant attire, sportive attire, careless attire and scrubs – all of which were displayed, with or without a white coat. Parents were asked whether or not they felt the physician was an important component of the medical encounter; they were also asked to choose the picture of the doctor they preferred to care for their child.

**Results:** A total of 250 parents participated in the study; 68% of the parents believe that the physician's attire is an important component of the medical encounter; 41% of the parents preferred the doctor to wear scrubs with a white coat, 22% preferred scrubs without a white coat. Careless

attire was the least preferred attire.

**Conclusion:** The physicians' attire was important for most of the participants. We recommend that doctors in inpatient wards wear scrubs. ●

## WHEN IT SNOWS ALL YEAR ROUND – VISUAL SNOW

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Visual snow is a neurological condition manifested as a prolonged visual experience of small flickering dots encompassing the entire visual field with additional visual and sensory-neural symptoms. The pathogenesis of this disturbance is unknown, although much progress has been made in recent years. The disturbance has been better defined and characterized. Additional insight into the pathological processes that play a role in this phenomenon has been gained, and different treatment modalities have been tried, some with better results. The purpose of this review is to increase awareness of this syndrome. ●

## THE ROLE OF COMPREHENSIVE CONSERVATIVE MANAGEMENT IN ELDERLY PATIENTS WITH END STAGE RENAL DISEASE

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The number of dialysis patients is consistently growing and the dialysis population is aging. Of all age groups of dialysis patients, the higher prevalence rate is in the elderly group (aged 75 years and older). The elderly patients have a high rate of comorbidities. Chronic dialysis treatment is expected to prolong survival. Older age and comorbidities are among the most powerful prognostic factors for survival on chronic dialysis. Observational studies found that after adjustment for age and comorbidities, dialysis treatment does not confer survival advantage when compared to conservative management in elderly patients with multiple comorbidities. Comprehensive conservative management is targeted for those patients who are not expected to benefit from chronic dialysis. The focus is on patients' preferences, specifically regarding issues of quality of life, and not necessarily on prolonging survival. For this process, shared decision-making is the recommended strategy. The rate of patients who opt for conservative management varies between countries. There is no data from Israel in this regard, but it is assumed that the conservative option is underutilized. There are different reasons for the current situation, factors

newborns with maternal risk factors.

**Goals:** To characterize the demography of infants for whom blood tests were indicated due to perinatal risk factors for infection and to elaborate on ways to minimize these invasive tests.

**Methods:** A retrospective study based on an analysis of the medical records of term and late-preterm infants born between January 1st, 2013 and December 31st, 2015, for whom blood cultures were indicated due to maternal risk factors.

**Results:** The study included 583 infants. Each infant had between 1 to 4 cultures taken (an average 1.9) - reaching a total of 1041 cultures, 11 of which were positive (1.05%). We discovered no statistically significant relationship between positive blood cultures and the duration of membrane rupture. Moreover, no significant relationship was detected between positive blood cultures and membrane rupture lasting more than 18 hours (despite shorter durations of antibiotic treatment - less than 4 hours).

Among those with positive blood cultures, we found a statistically significant relationship between carriers of Group B streptococcus (GBS) born at 35-36 gestation and membrane ruptures lasting 14 hours or less. On the other hand, maternal fever was related to membrane rupture lasting 14-18 hours, but not to membrane rupture lasting 18 hours or more. When evaluating the rate of positive cultures in our study, no statistically significant difference was found between Arab and Jewish populations.

**Conclusions:** Our findings support the presumption that the benefit of blood tests taken in healthy neonates with maternal risk factors is questionable; Out of 583 infants, only 11 had positive blood cultures. The policy of initiating antibiotic treatment 14 hours after membrane rupture has little or no value in preventing the need for assessing those born 18 hours or more after membrane rupture. This study joins other studies around the world that support the conclusion that there is a very small benefit in blood tests taken from a healthy newborn with maternal risk factors. Other ways of assessing the presence of congenital infection in a healthy newborn with maternal risk factors should be found. ●

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### THE PROLIFERATIVE EFFECT OF DENDRITIC CELLS IN OVARIAN CANCER AND THE RELATIONSHIP WITH THE IGF SIGNALING PATHWAY

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**Introduction:** Epithelial ovarian cancer (EOC) is the principal

cause of death from gynecologic cancer in developed countries. While surgery and chemotherapy can improve survival, the mortality and morbidity rates remain significantly high. The insulin-like growth factor (IGF) axis has been shown to play an important part in carcinogenesis of several human malignancies. Preclinical studies reported a significant anti-proliferative activity of IGF1 receptor (IGF1R) inhibitors in ovarian malignancies, however, clinical studies have shown variable response rates. Recent data indicate that immunotherapy could hold promise in improving EOC treatment. Dendritic cells (DCs) which are antigen presenting cells evoke a positive immune response. Moreover, a recent study shows that IGF treatment can inhibit DC maturation.

**Aims:** To investigate the involvement of IGF1R signaling in DCs and the effect of combined DCs and IGF1R inhibitor treatment on EOC cells growth.

**Methods:** HL-60 leukemic cells were differentiated to DCs and ligand induced phosphorylated IGF1R levels were measured by Western blotting. Next, inhibition of IGF1R in DCs was applied and the effect of this inhibition on EOC cell lines ES2 and SKOV3 was examined using the migration assay method.

**Results:** The differentiation of HL-60 into DCs was associated with decreased levels of both IGF1R phosphorylation and total IGF1R protein. In addition, in-vitro growth assays (scratch assay) demonstrated an increased growth of both ES2 and SKOV3 cells into the scratch zone when co-cultured with DCs which were not pre-treated with IGF1R inhibitor as compared to treated DCs.

**Conclusion:** Preliminary data suggest that DC differentiation is associated with IGF1R signaling downregulation. Moreover, inhibition of IGF1R signaling in DCs might decrease EOC growth. ●

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### DIRECT ADMISSION OF STEMI PATIENTS TO THE CARDIAC CARE UNIT VERSUS ADMISSION VIA THE EMERGENCY DEPARTMENT FOR PRIMARY CORONARY INTERVENTION IMPROVES SHORT AND LONG-TERM SURVIVAL

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**Introduction:** Shortening door-to-balloon time intervals in ST-elevation myocardial infarction (STEMI) patients treated by primary percutaneous coronary intervention (PPCI) is necessary in order to limit myocardial damage. Direct admission to the cardiac care unit (CCU) facilitates this

of 18F-FDG/PET-CT allowed accurate diagnosis in some patients in which TEE results were negative. ●

### WAITING TIME FOR SURGICAL FIXATION OF FEMORAL NECK FRACTURES: DOES A DIAGNOSIS-RELATED GROUP PAYMENT METHOD MATTER?

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**Background:** Early surgical fixation of femoral neck fractures in elderly patients has been suggested to decrease morbidity and mortality and to improve treatment outcome. This study evaluates the effect of the implementation of a diagnosis-related group payment method in our hospital on waiting time for surgery and the short-term outcomes of elderly patients following surgical fixation of hip fractures.

**Methods:** Demographic and clinical characteristics of 75 consecutive patients, who underwent surgery for hip fracture in our hospital, before the implementation of a diagnosis-related group payment method, were compared with those of 75 consecutive patients, who were operated on after the implementation of the payment system.

**Results:** Demographic characteristics were similar for both groups. Before the implementation of a diagnosis-related group payment method, 84% of the patients waited longer than 48 hours for surgery, compared to only 24% of patients after the implementation ( $p < 0.001$ ). Medical considerations and operation room availability were the main reasons for delaying surgery in both groups. Mortality and morbidity rates during the hospital stay remained similar, regardless of the implementation of the payment method.

**Conclusion:** The implementation of a diagnosis-related group payment method shortened the waiting time for surgical hip fixation in elderly patients treated in our hospital, with no effect on the mortality and complication rate during the hospital stay. ●

### CONTRIBUTION OF CONVENTIONAL CHEST/ ABDOMINAL PLAIN FILMS FOR THE DECISION-MAKING PROCESS IN PATIENTS WITH PREVIOUS ABDOMINAL SURGERIES, WHO HAVE SUSPECTED GASTROINTESTINAL PERFORATION

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**Introduction:** Gastrointestinal perforation is a well-known phenomenon among patients presented to emergency rooms. Common causes for perforation are gastric and

duodenal ulcers, colon tumors and trauma. Some patients are operated on immediately due to the clear clinical picture of acute abdomen. The most accurate imaging is the abdominal CT scan. Conventional X-rays remain the first choice in the case of GI tract perforations. Our clinical observation is that in many cases X-ray studies are not sufficient for the decision-making process in patients with previous abdominal surgeries.

**Purposes:** The purpose of this study was to evaluate the impact of X-rays on the decision-making process in patients with previous abdominal surgery.

**Methods:** A retrospective evaluation was conducted of chest/abdominal X-rays, computed tomography findings and the surgeries reports of patients admitted due to GI perforation.

**Results:** The study population of 69 patients was divided into two groups. In group 1: patients without previous abdominal surgery, X-rays of 27 patients (69.2%) were found positive for free air. In group 2: patients with previous abdominal surgeries, 16 patients demonstrated free air on chest/abdominal X-rays. The sensitivity in group 2 (53.3%) was found significantly lower compared to group 1 (69.2%). The difference between the groups was not statistically significant; 19 of 30 (63.3%) patients with previous abdominal operations needed abdominal CT scan before final surgical decision in comparison to 38.5% of the patients without previous abdominal operations.

**Conclusions:** Based on these results we recommend not routinely performing X-rays in patients with previous abdominal surgery. Urgent computed tomography should be the first imaging modality.

**Discussion:** In patients with previous abdominal surgeries, free air is visible only in half the patients in routine X-ray imaging. A significant number of those patients needed abdominal CT scan.

**Summary:** Our study demonstrated that chest and abdominal plain radiography films are insufficient for the decision-making process in patients with previous abdominal operations. A multi-center prospective study is required in order to validate our findings. ●

### INFECTIOUS DISEASE ASSESSMENT OF TERM INFANTS WITH RISK FACTORS – EVALUATION OF NECESSITY AND METHODS OF PREVENTION

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Neonatal early onset sepsis is a significant perinatal complication with the risk of severe morbidity and mortality. As a result, global guidelines have been written to emphasize the indications for the detection of infections in healthy

## HILLEL YAFFE MEDICAL CENTER – SIXTY YEARS OF ADVANCEMENT

Alon Nevet

Hillel Yaffe Medical Center, Hadera

The Hillel Yaffe Medical Center began its journey sixty years ago. Since its early days, the hospital's dedicated teams have struggled to bridge the gaps between limited resources and their uncompromising desire to meet patients' needs. Today, Hillel Yaffe Medical Center possesses more than five hundred beds in approximately eighty departments and units and dozens of ambulatory clinics. The medical center serves a population of half a million residents, with forecasts pointing to unprecedented growth, due to vast construction in the area and the settlement of the new city of Harish.

In addition to the devoted care of patients, the other pillars of excellence in medicine, namely research and teaching, are actively developing. Hillel Yaffe is affiliated with the Technion – Israel Institute of Technology, and many of its physicians have academic appointments, owing to their dedication to scientific research and academic teaching, in addition to excellence in clinical practice.

Research laboratories located in the medical center are operated by physicians and scientists, enabling them to conduct studies in basic science.

Academic teaching and research are also practiced by nurses and other practitioners. The Hillel-Yaffe School of Nursing, affiliated with Tel Aviv University, has recently won the Ministry of Health Star Program for its high achievements.

This issue is dedicated to articles written by Hillel Yaffe Medical Center's physicians in a variety of fields. ●

## CORRELATION BETWEEN MRI AND ARTHROSCOPIC FINDINGS IN THE DIAGNOSIS OF KNEE PATHOLOGY IN YOUNG AND ADULT PATIENTS

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**Background:** MRI is increasingly used as a diagnostic tool for sports injuries involving the knees before referral to arthroscopy.

**Objectives:** Since degenerative changes increase with age, we aimed to evaluate whether age affects the accuracy of MRI.

**Methods:** This is a retrospective study of patients with knee injury whose evaluation included both MRI and arthroscopy. Two age groups were defined: young adults (18-39 years) and adults (40 years and above).

**Results:** Of 966 patients undergoing knee arthroscopy, 132 had preoperative MRI: 48.5% young adults and 51.5% adults. Arthroscopy identified a meniscus tear in 85% and a ligament

tear in 21%. Seventeen percent had combined tears and no injury was identified in 4%. The sensitivity and specificity of MRI for ligament tears was 59%, 95%, and for meniscus tears was 91%, and 40%. The sensitivity for bucket handle tears was 86%. The sensitivity of MRI for combined injury was low, 41%. In 8% of patients no pathology was identified by MRI, which was confirmed by arthroscopy in only 4%. One patient with normal MRI had a bucket handle meniscal tear and one other patient had a tear of the anterior cruciate ligament. MRI in adults and young adults revealed that sensitivities for the different types of lesions were similar for both age groups.

**Conclusions:** Although degenerative changes increase with age, our hypothesis that MRI will be less sensitive in adults was proven wrong. In the presence of appropriate signs and symptoms, older age should not be considered a factor affecting decisions concerning preoperative imaging workup. ●

## CHRONIC Q FEVER IN PATIENTS AT THE HILLEL YAFFE MEDICAL CENTER – THREE YEARS OF FOLLOW UP

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**Introduction:** Q fever is an acute zoonotic infection, which in some cases is complicated by a chronic disease. Diagnosis is based on serology, and in patients with a chronic disease, the source of infection must be investigated.

**Aim of study:** To describe patients with chronic Q fever, who were treated at the Hillel Yaffe Medical Center: risk factors, course of the disease, and serological findings.

**Methods:** This was an observational study; patients with chronic Q fever who were treated in the Infectious Diseases Clinic during the period 5/2015 – 1/2018 were included. The diagnosis was based on clinical findings and results of phase 1 IgG > 800. Clinical, laboratory and imaging data from diagnosis to the end of treatment were collected.

**Results:** Sixteen patients were included in the study; all these patients were treated with antibiotics, and three also underwent operations. Risk factors for a chronic infection were a significant valvular disease in 11 patients (69%) and vascular diseases in five (31%). Trans-esophageal echocardiogram (TEE) was performed in 13 patients (81%), and a 18F-FDG/PET-CT was performed in eight patients (50%). The source of infection was found in seven patients, four with endocarditis and three with vascular infection.

**Conclusions:** Endocarditis was more common than vascular infection. In 56% of the patients, the source of the infection was not found.

**Discussion:** We presented patients with chronic Q fever who were treated in a unique clinic in Israel. Diagnosing the source of the infection is challenging; the increasing use