Conclusion: Estrogen receptor alpha polymorphism may become an additional risk factor affecting course and progression of Type1 diabetes mellitus in pubertal girls.

Evaluation of role of CXCR4 as a marker in neonatal sepsis
M.H. Mohamed1, N.M. Abushady1 and N. Refaat2
From the 1Department of Pediatrics, Ain Shams University and 2Departement of Clinical Pathology, Ain Shams University
mahahassan2007@gmail.com

Background: Neonatal sepsis is one of the major health problems which supported by a cytokine-mediated condition. CXCR4 is an alpha-chemokine receptor specific for a molecule endowed with potent chemotactic activity for lymphocytes. CXCR4 expression on the surface of circulating blood lymphocytes was up-regulated during sepsis.

Aim: to evaluate the diagnostic and prognostic value of CXCR4 in late onset sepsis in neonate.

Patient and Methods: we conducted a prospective, case control study on 60 neonates >34 weeks gestation, divided into 2 groups: 30 healthy neonate as control and 30 neonates admitted to neonatal intensive care unit with late onset sepsis as patient group. This group was further classified into two groups, proven sepsis (positive blood culture) and probable sepsis (negative blood culture). All neonates included were subjected to full clinical examination, CBC with differential, CRP with titre, blood culture. All neonates included were subjected to full clinical examination, CBC with differential, CRP with titre, blood culture and serum CXCR4 at the time of suspicion of infection. The patient group was subjected to repeat investigations within 48-72 hours after treatment as follow up.

Results: CXCR4 was increased in patients group and in proven sepsis group compared to probable sepsis group. There was highly significant positive correlation between CXCR4 with CRP and total leucocytic count, neutrophil and lymphocytes. ROC curve showed that the best cut off point for CXCR4 in diagnosis of late onset sepsis was found > 21.3(pg/ml) with sensitivity of 100%, specificity of 100% and area under curve of 100%.

Conclusion: CXCR4 is a good biomarker of inflammatory response in neonates with late onset sepsis. CXCR4 concentration increased in both probable and proven sepsis and decreased in response to effective treatment.

A 3 years experience of operated surgical neonates outcome in a tertiary hospital of Ain Shams University (neonatal intensive care unit)
M.S. El-Shimi1, N.E.-D.M. Abd El-Aal1 and M.S. Mohamed2
From the 1Pediatric Department, Faculty of Medicine, Ain Shams University and 2General Practitioner at El Shorta Hospital
elshimi@yahoo.com

Background: Surgery on a newborn has been one of the most challenging subjects in medical science. A neonate is born with its unique physiological features of very narrow normal ranges, beyond which it is helpless to cope with the adverse situations. Added to this, it has to be able to respond to life-threatening surgical conditions for its survival.

Objectives: We aimed in this piece of work to assess the outcome of different neonatal surgical conditions and factors responsible for mortality in surgical neonates.

Patients and Methods: The present retrospective study was conducted in the NICU of Ain Shams University Children’s Hospital using the records from the beginning of year 2011 till the end of year 2013. The recorded data included gestational age, postnatal age at admission, sex of neonates, maternal age, mode of delivery, surgical diagnosis, surgery outcome, risk factors for occurrence of sepsis, classification of type of sepsis if present (Early-onset sepsis, Late-onset, or nosocomial), blood culture Results, antimicrobials used, length of hospital stay, need for ventilation, risk factors for occurrence of sepsis, cause of death.

Results: The study included 69 patients with surgical problems who were admitted to the NICU. They were 45 males (65.22%) and 24 females (34.78%) with a male to female ratio of 1.8: 1. They were 10 preterms (14.49%) and 59 full-terms (85.51%); with mean gestational age range from 32-40 weeks, mean ± SD: 36.91 ± 1.98 weeks. 37 (53.62%) were delivered by LSCS and 32 (46.38%) by SVD. 33.33% of neonates were admitted between 1 and 2 days postnatal, 42.9% were more than 1 week old, with mean age of admission 9.49 ± 10.37 days. The most common surgical problems were Tracheo-oesophageal fistula (9 cases), followed by imperforate anus low anomaly 5 cases, imperforate anus high anomaly 5 cases, then Hirshsprung disease 4 cases. Also hydrocephalus and Arnold Chiari malformation each 4 cases. Diaphragmatic hernia 4 cases. 61 cases had sepsis, 50 cases were discharged, 19 died and 8 had no complications. The most common causes of death were; sepsis (16 cases), heart failure (9 cases), respiratory failure (5 cases), cardio-pulmonary failure (3 cases) and pneumonia and pulmonary hypertension each one case.

Conclusion: Most of cases were full term babies and had late presentation to our hospital which led to delayed operations. Most common surgical problem was trachea-oesophageal fistula.

Analysis of pain effect on EEG recordings and oral sucrose sucking effect on pain reduction in neonates
H. Abdelsami Awad, S. Hassanein, R. Mohamed Abdou and L. Taher Bassiouny
From the Pediatric Department, Faculty of Medicine, Ain Shams University
hawad2007@yahoo.com

Background: Evaluating pain in neonates is a considerably difficult task, given the fact that pain is merely a subjective phenomenon. This study aimed at assessing the effects of pain on the EEG picture of neonates, and whether or not, sucrose administration can alleviate pain associated with invasive neonatal procedures.

Methods: The EEG recordings of a cohort of 21 neonates, who didn’t exhibit any manifestations of neurological deficits, were prospectively analyzed. Postnatal age ranged between 3 and 27 days, with a mean of 14.05 ± 7.32 days. EEG recording, vital data and Neonatal Infant Pain Scale (NIPS) scoring were performed before and following painful stimulation via heel stick. Blood sampling during routine blood glucose measurements via glucometer, during non-nutritive sucking (NNS) and during sucking of sucrose.

Results: Analysis of obtained data revealed Significant rise in heart rate, lower oxygen saturation following nociceptive stimulus (without soothing (p = 0.0007 & p = 0.016 respectively). Sucking of sucrose was associated with a significantly lower