concentrations in exclusively breastfed infants versus formula-fed infants.

Patients and Methods: A case-control study conducted on 90 infants aged from birth to 6 months divided into 2 groups, Group A (no: 45): Healthy exclusively breastfed infants, Group B (no: 45): Healthy formula-fed infants (on standard formula), recruited from Ain-Shams University pediatrics hospital clinical nutrition clinic in the period from December 2015 to June 2016. After clinical history taking from parent/guardian of each infant, Anthropometric measurements and Stool samples were collected and analyzed, fecal calprotectin concentrations were measured by ELISA.

Results: Stool samples were obtained from 90 infants (43 boys, 47 girls), mean age was 2.59 ± 1.42 months. Fecal calprotectin concentration was 85 microgram/gram (median) with IQR from 25–70 g/g. The median fecal calprotectin concentration was significantly higher in healthy breastfed infants (340 μg/g, range 27–2000 μg/g) than that in healthy formula-fed ones (40 μg/g, range 25–70 μg/g). (p < 0.01).

Conclusion: Breastfed infants have higher concentrations of fecal calprotectin compared to formula-fed infants in the first 6 months of life.

Impact of maternal knowledge and practice on the growth of their preschool children in sixth of October city, Cairo
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Background: Malnutrition has been responsible for 60% of the 10.9 million annual deaths and 50 to 70% of the burden of diarrheal disease and respiratory tract infections among under-five years old children.

Objectives: To assess mothers’ feeding knowledge and practice of their 6 to 60 months old children in 6th of October City and to evaluate the influence of this knowledge on their children’s nutritional status.

Methods: A cross-sectional study was conducted among mothers-children pairs randomly selected from two family health centers in 6th of October city using an interview questionnaire, 24 hr. dietary recall, and anthropometric measurements.

Results: Interviewed participants were 252; mean mothers’ age was 27.9 ± 6 years, 81% were housewives, and 61% had higher than 2ry school education. Early initiation of breast feeding (BF) was reported by 28.9% of mothers, 51.2% practiced exclusive BF for 4-6 months, 25.4% gave formula milk during 1st 6 month of life, 16.4% continued breast feeding up to 2 years. Stunting, wasting & overweight among children were 20.2%, 6% and 9.9% respectively. Mothers' age, education, nutritional knowledge and practice scores, and family socioeconomic status significantly affected children Height for age Z-score (HAZ) and Weight for Height Z-score (WHZ).

Conclusion: This study demonstrated that mothers had good knowledge and practice regarding most aspects of BF and weaning yet they showed poor practice of early initiation and continuation of BF, introduction of meat and whole eggs, children consumption of fruits, vegetables, and eggs.

Genotype phenotype pattern in a cohort of Egyptian patients with sickle cell disease
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Background: Sickle cell disease (SCD) refers to all different genotypes, yet secondary effectors genes are likely to modulate its phenotype. Methods &Aim: In this cross sectional study we aimed to evaluate the genotypes/phenotype pattern among SCD patients using polymerase chain reaction (PCR) and reverse hybridization.

Results: The most common BT gene mutation among SCD patients was Codon 6[A > T] HbS / β+ IVS1-1[G > A] (18%). Homozygous SCD patients had a significantly earlier age of onset, a higher baseline MCV and a lower HbF % compared with Sβ0 and Sβ+ patients. Fifty five percent of the patients were diagnosed by baseline High performance liquid chromatography (HPLC) as sickle β+ disease compared to only 10.5% proved by genotype. Only 52% of homozygous sickle cell anemia (SS) patients by genotype had MCV normal and 72% had HbA2 < 3.6%. Although, we found a higher baseline Hb S% among homozygous sickle cell patients compared with the two other groups, yet Results did not reach statistical significance.

Conclusion: The presence and the nature of associated β-thalassemia mutations influence the clinical presentation of sickle cell disease. We also emphasized the presence of discrepancy between genotype and baseline hemoglobin pattern by HPLC.

Anthropometric assessment of Egyptian children with autistic spectrum disorders (ASD)
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Background: Autism Spectrum Disorders (ASDs) are a diverse group of complex heterogeneous neuro-developmental conditions influencing the ability to relate to and communicate, as they are characterized by a wide range of cognitive, emotional and neuro-behavioral abnormalities Aim: To study the anthropometric measurements of Egyptian children with Autistic spectrum disorder (ASD), and to correlate the demographic factors with severity of the disease.

Methods: 238 children with ASD were recruited from Child and Adolescent Psychiatry Clinic, Children hospital, Ain Shams University, Cairo, Egypt. Children fulfilled DSM (V) criteria for ASD. After thorough clinical assessment, the following eight anthropometric measures were recorded weight, height, body mass index (BMI), head circumference (HC), mid upper arm circumference, sub scapular skin fold thickness (SSF) and sub iliac skin fold thickness (SIS) and compared to the Egyptian national percentiles. Patients were further evaluated by CARS and Gilliam rating scale Results: The Z-score for weight, BMI, SSF and SIS were significantly higher in autistic children as compared t norms (P < 0.0001) While, the head circumference was significantly lower (P < 0.0001). The Results were not significantly associated with the age, sex or the age of presentation of the disease. However, these parameters were significantly associated with the severity
of the disease. There was significant negative correlation between CARS and Z Head circumference and significant positive correlation between CARS and Z BMI. Also, significant negative correlation between the Gilliam score and Z Head circumference and positive correlation between Gillian and Z BMI.

**Conclusion:** There is a growth aberration in our sample of Egyptian children with ASD. Especially, a growing rate of obesity that warrant a nutritional program to be a part of the routine care of our ASD children.

**Insulin resistance among hepatitis C infected thalassemic children and survivors of childhood malignancy**

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**Background/Aim:** Hepatitis C virus appears to contribute, directly or indirectly, to the development of Insulin Resistance (IR). The presence of IR in the setting of hepatitis C infection plays a role in the progression of HCV-related liver disease and may be associated with suboptimal responses to antiviral therapy. The aim of this work was to find possible relation between the occurrence of insulin resistance in hepatitis C virus infected children who were either thalassemic or survivors of childhood malignancy.

**Methods:** 60 hepatitis C virus infected children (30 thalassemic and 30 childhood malignancy survivors) and 30 controls (mean age: 11.88 ± 3.43 yrs; range 3-19 yrs; male predominance: 60%) were recruited from Pediatric hematology and oncology clinics, Children’s Hospital, Ain Shams University. All underwent ALT, AST, Alkaline phosphatase, Serum Bilirubin, PT and Serum albumin, Fasting blood glucose, Fasting Insulin, Serum ferritin, HCV antibody, HCV-RNA (by PCR), Homeostasis model assessment (HOMA) of insulin resistance.

**Results:** There was significant difference between patients and controls as regard fasting glucose, fasting insulin (p < 0.0001), HOMA (p < 0.0001), and HOMA IR (p < 0.001). There was no significant difference between male and female thalassemic patients except for serum ferritin level which was significantly higher among female patients (2450.87 ± 1990.33 versus 1023.91 ± 1453.52ng/mL (p < 0.001)). There was positive correlation between serum ferritin among all patients with total bilirubin, platelets, ALT and ALP. There was positive correlation between fasting insulin among patients with weight and between fasting insulin and HOMA. There was no significant difference as regard the previous items between the two subgroups of patient involved in the study. HOMA IR was significantly higher among female survivors of childhood malignancy (p<0.05). HOMA IR was found normal among all controls (100%) and in 48 patients (80%), moderate HOMA IR was present in 12 patients (20%) and 48 patients (80%) no severe HOMA IR was present in patients enrolled in this study.

**Conclusions:** Hepatitis C virus appears to contribute to the development of IR among hepatitis C infected children.

**Assessment of liver disease progression among survivors of childhood malignancy**


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**Background/Aim:** Egyptian children undergoing chemotherapy are at a high risk for HCV infection due to immunosuppression and multiple blood transfusions. The aim of this prospective study was to evaluate the feasibility of liver stiffness measurement and to compare Fibroscan to AST to platelet ratio index (API) and FIB-4 (combining platelets, ALT, AST and age) in diagnosis of advanced fibrosis in adolescent cancer survivors with chronic HCV.

**Methods:** Fifty one cancer survivors (mean age: 13.41 ± 4.14 yrs; range 14-19 yrs; male predominance: 76.5%) with chronic HCV were prospectively recruited from the National Cancer Institute. All underwent non-invasive tests for fibrosis: Fibroscan, APRI and FIB-4 score, in addition to ALT, ALP, serum bilirubin, albumin, PT, ferritin, ultrasound and liver biopsy when necessary (n = 6).

**Results:** Patients were grouped according to Fibroscan liver stiffness into 2 groups; group 1: patients with fibrosis stage F0-F2 (no significant fibrosis; 80.4%) and group 2: patients with fibrosis stage F3-F4 (significant fibrosis and cirrhosis; 19.6%). There was a highly significant difference between the 2 groups regarding APRI (p < 0.001). In addition to a significant difference regarding the FIB-4 score (p = 0.03), ALT (p = 0.01) and platelet count (p = 0.01). Liver stiffness showed positive correlation with duration of chemotherapy, height, ALT, ALP, ferritin, APRI and FIB-4 (r = 0.37, 0.31, 0.28, 0.45, 0.52, 0.32 and 0.40 respectively). The AUROC curves for APRI and FIB-4 for prediction of significant fibrosis (F3-4) was 0.85 and 0.712, respectively. As far as APRI is concerned, a cut off value of 0.86 was selected for the best prediction of mild and severe fibrosis (sensitivity: 80%, specificity: 90.2%, PPV: 66.7% and NPV: 94.9%). The best predictive cut off value for FIB-4 was 0.52 (sensitivity: 70%, specificity: 85.4%, PPV: 53.8% and NPV: 92.1%). APRI was more accurate than FIB4 in detection of significant fibrosis.

**Conclusions:** The Results indicate that liver stiffness measurement by Fibroscan is feasible for identifying the stage of hepatic fibrosis in Pediatric cancer survivors with chronic HCV. APRI is more preferred than FIB4 in detecting significant fibrosis in resource limited countries.

**Asthma biomarkers and psychological profile of asthmatic children and their caregivers; is there a link?**

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Parental psychosocial status has been linked to pediatric bronchial asthma. Parental stress was found to be associated with poor pulmonary functions of their asthmatic children and increased frequency of their hospitalizations with increased