Food Diaries to evaluate dietary intake. Nutritional bloods to assess iron and Vitamin D status were taken.

Results Participants included nineteen children. Median age was 7.9 years (range 0.6– 18.1 years). Majority were female (n=14, 74%). Median age at diagnosis was 2.5 weeks (range birth – 2.7 years). Growth Hormone treatment was in place for the majority (n=14, 74%) and commenced at a median age of 2.6 years. Of the reporting parents, 89% (n=17) were mothers with 37% (n=7) reporting to be homemakers. All children were living in 2 parent households. BMI was calculated for all children over 2 years (n=15). Using the BMI classification 20% (n=3) were underweight, 60% (n=9) were healthy weight, one patient was overweight and 13.3% (n=2) were obese. Body composition analysis was completed where appropriate (n=9), median% bodyfat was 26% and ranged from 10 - 40%. The majority reported early feeding issues, all of whom required admission to the special care baby unit with median length of stay of 7 days (IQR 14 days). Difficulties progressing with textures and difficulties achieving typical feeding milestones was reported in 7 cases (39%). Food seeking behaviours were present in 10 patients (55%) with a median age of onset of 3.7 years. Children achieved 41% - 112% of their estimated average requirement (EAR) for energy (median 82%, IQR 33). The macronutrient composition of the diet varied greatly. Insufficient micronutrient intake was reported for iron, calcium and vitamin D. Nutritional bloods identified iron deficiency anaemia and vitamin D insufficiency in 2 patients. 58% (n=11) were taking self-prescribed supplements.

Conclusion Early feeding issues are common in PWS. The majority of our cohort were classified as having a healthy BMI achieved through significant restriction of energy intake. Suboptimal dietary intake of and deficiencies in key nutrients was noted. This study highlights the importance of adjusting energy intake to prevent overweight and obesity while ensuring adequate micronutrient intake to support optimal growth and development.

GP216 AN AUDIT OF MAINTENANCE INTRAVENOUS FLUID THERAPY IN THE PAEDIATRIC GENERAL WARDS AT MATER DEI HOSPITAL, MALTA

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Background Intravenous fluids are one of the most frequently prescribed drugs in hospital, and yet the practice continues to fall short of National Institute for Health and Care Excellence (NICE) guidelines. Paediatric patients are particularly vulnerable to complications of intravenous fluid therapy.

Aims, objectives and standards We aim to better prescribing practices of intravenous fluid prescription and fluid balance monitoring by staff in the paediatric wards, and to make recommendations and carry out interventions to improve areas where the adherence to NICE guideline 'Intravenous fluid therapy in children and young people in hospital', published in December 2015, is poor, as identified by the first cycle of the audit.

Methodology Data was collected prospectively from the notes of patients aged 0 to 16 years admitted in the two general paediatric wards at Mater Dei Hospital over a four month period. Patients started on intravenous maintenance fluids were included. Data included which fluid was prescribed, the indication, prescription practices, input and output charting and monitoring of serum electrolytes and glucose. Children with diabetic ketoacidosis and renal or hepatic disease were excluded.

Results A total of 65 patients were included. In only 5% of the treatment charts reviewed was the maintenance intravenous fluid prescribed, despite there being a specific section for fluid prescription. Actual weight was recorded on 89% of the drug charts. Estimated weight was documented in the remaining 11%. 81% of calculations of infusion rate on actual weight were performed correctly according to the Holliday-Segar formula. 100% of patients were administered 5% dextrose in 0.45% saline, as per local availabilities. On admission, U&Es were checked in 97%, and blood glucose in 79% of patients. However, U&Es were only checked in 31% and blood glucose in 14% of the patients still on maintenance fluids 24 hours later. Fluid input and output charting was documented in 94% of patients, but in only 19% of these patients were subtotals written every 24 hours. The standard charts used at Mater Dei Hospital do not have a section for 12 hourly documentation.

Conclusion Staff within the department must be educated regarding the need for improved intravenous fluid prescription and the importance of conducting daily U&Es and blood glucose input and output monitoring. Documentation of input and output must also be improved. The input and output charting form needs to be reviewed to include 12 hourly subtotals.

GP217 MARKERS OF ENDOTHELIAL DYSFUNCTION SVCAM-1, VEGF AND METABOLIC STATUS IN OBESE ADOLESCENTS

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Introduction Obesity in adolescents is associated with the development of metabolic disorders, chronic inflammation and endothelial dysfunction.

Objectives To determine the peculiarities of metabolic status and presence of markers of endothelial cell dysfunction sVCAM-1 and VEGF-A in adolescents with obesity.

Methods We examined 44 young people: 22 teenagers with obesity (body mass index - BMI – from 30.1 to 42.87) and 22 teenagers with normal physical development (BMI from 18.5 to 24.99). The age of patients ranged from 13 to 18 years (average of 14.25 ±1.2). The following laboratory data was screened: level of glucose, insulin, liver enzymes, lipid profile, uric acid, C reactive protein (CRP). Insulin resistance (IR) was estimated by calculation HOMA-IR index. In addition, we analyzed serum concentrations of vascular cell adhesion molecule 1 (sVCAM-1) and vascular endothelial growth factor A VEGF-A – markers that indicate the presence of endothelial dysfunction. Data was analyzed with the use of statistical package Statistica 10.0 for Windows-10. The significance of the differences was determined at P value <0.05.

Results We have identified the following features of carbohydrates and lipid metabolism in obese adolescents: