G470 A RARE CASE OF LESCH-NYHAN SYNDROME

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4 year, male child born out of 2nd degree consanguinous/marriage, came with complaints of vomiting with H/O delayed development of milestones with H/O self destructive biting of fingers and presence of involuntary movement. Antenatal, natal and postnatal course of child was normal, with family H/O similar complaints and death of 1st born male child and abortion of 2nd child. On clinical examination, self mutilated fingers and involuntary movements were noted, with these findings of global developmental delay, dystonia and self mutilation we proceeded our investigation. Serum uric acid level was 45.8 mg/dl (elevated) and urinary uric acid level was 78 mg/dl (elevated). MRI brain showed diffuse cerebral atrophy. Child is suspected to be affected with Lesch-Nyhan Syndrome and has been evaluated for pathogenic variations in the HPRT1 gene. Mutational study for HGPRT assay showed a hemizygous 5' splice site proximal variation in intron 8 of the HPRT1 gene that affects the position 3 nucleotides downstream of donor splice site of exon 8 (Classified as a variant of uncertain significance). For sequencing the variants in the parents, sample was sent for analysis and results were awaited, which will be intimated after arrival of result. Incidence of Lesch-Nyhan Syndrome was 1 in 3,80,000. It is an X linked disorder of purine metabolism, results from HPRT deficiency, which leads to failure to consume PRPP in salvage reaction results in increase of hypoxanthine level which further leads to increase in uric acid levels. Common clinical manifestation includes self injurious behaviour, intellectual disability and dystonic movements. Analysis of HPRT enzyme was used for the confirmation of diagnosis. Treatment includes use of allopurinol, restraints, antianxiety and mood stabilisers, deep brain stimulation and S-adenosylmethionine. Average life time was found to be 30 to 40 years.

G471 CLINICAL CHARACTERISTICS, LABORATORY FINDINGS AND MANAGEMENT DATA IN A SINGLE-CENTER COHORT OF PATIENTS WITH HETEROZYGOUS FAMILIAL HYPERCHOLESTEROLEMIA

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Background Familial hypercholesterolemia (FH) is an autosomal dominant lipid metabolism disorder characterized by high blood cholesterol levels and early cardiovascular disease. Patients suffer from either a homozygous or heterozygous form. Heterozygous FH is a common genetic disorder with an incidence of 1:500 people. Patients are normally treated with dietary intervention, statins, bile acid sequestrants, or other lipid-lowering agents.

Aim The aim of this study was to record data to characterize the cohort of heterozygous FH patients in our center.

Methods/Case Report We have retrospectively recorded the epidemiological, clinical, biochemical and genetic data of

patients with heterozygous FH aged between 10 and 17 years old treated in our hospital over the last 20 years. In addition, we have recorded data in regards to treatment modalities and biochemical parameters related to response in treatment.

Results We are describing 91 patients with a mean age of 14 years (10–17 years). Fifty-one patients were males and 40 were females. The mean age at diagnosis was 8.9 years (range 1 and 16 years). Most of the patients were asymptomatic at diagnosis, while presentations included associated obesity (8 patients), diabetes mellitus (3 patients), xanthomas and xanthelasmas (1 patient each). Mean levels of total and LDL cholesterol at diagnosis were 6.8 mmol/L (4.2 & 10.1 mmol/L) and 4.7 mmol/L (1.92 & 8.3 mmol/L) respectively. Seventy-seven patients had a positive family history of hypercholesterolemia. Forty-two patients had their diagnosis genetically confirmed (mutations in LDLR in 36 patients, and apoB genes in 6 patients respectively). Management included dietary manipulation in 70 patients and pharmacological therapy in 45 patients. Out of various medications, Atorvastatin was the most frequently used in 35 patients. Six months following treatment the vast majority of patients had a favorable outcome with mean levels of total cholesterol and LDL cholesterol being 5.3 mmol/L (3.4–7.9 mmol/L) and 4.37 mmol/L (1.86–6.5 mmol/L) respectively.

Conclusion Our data suggest that familial hypercholesterolemia is a common metabolic disorder and most of the patients are asymptomatic at diagnosis during childhood. A high index of suspicion is required in subjects with a family history of cardiac or cerebrovascular symptoms. Treatment with Statins is effective and early initiation should be considered to avoid long term complications.

G472 DELAYED DIAGNOSIS OF A GLUCONEOGENIC DISORDER IN CHILDREN WITH HYPOGLYCAEMIA AND/OR LACTIC ACIDOSIS: LESSONS LEARNT

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Aim To describe the clinical course of children in whom the diagnosis of an underlying metabolic disorder was delayed due to a failure of obtaining urine for organic acid analysis at the time of initial presentation with hypoglycaemia and/or lactic acidosis.

Method Retrospective review of case notes of children who had a delay in diagnosis of Fructose 1,6 bisphosphatase deficiency.

Results Five (4 male) children (age range 7 days – 6 yrs old) were identified. The majority (3/5) had presented with hypoglycaemia and lactic acidosis which responded to dextrose infusion. Two patients (twin siblings) presented with lactic acidosis only. Urine organic acids were measured at the initial presentation in only one patient. In 1/5 patients, urine was obtained at the time of hypoglycaemia but was stored for toxicology due to a lack of clarity on specimen request form regarding patient's clinical presentation. In 4/5 patients,