Methods This was a retrospective cohort study which examined the incidence of orthopaedic admissions that were attributed to a somatoform disorder over a five year period. All cases which were diagnosed as having a somatoform disorder were included. The individual presentation of each case and the factors of each case that were attributable to the development of such a disorder were assessed in terms of their statistical significance. Factors included childhood trauma, bullying and stressors within the home environment.

Further to that, the economic impact of the investigations and treatments initiated prior to a formal diagnosis of a somatoform disorder were assessed in terms of a cost-benefit analysis framework.

Conclusions Somatoform disorders are a common theme throughout the varying subspecialties of paediatric medicine in particular orthopaedic surgery which has regular admissions attributable to this disorder.

Our research demonstrates that the development of a somatoform disorder is typically attributable to a number of contributing factors. In our study population, some of these factors were found to be statistically significant such as bullying. Further to that, the role of social media was highlighted within several individual cases as a potential factor. This burgeoning influence on children and adolescents highlights the importance of undertaking more research in how this can affect children in terms of their emotional and social development.

Finally, in terms of a cost-benefit analysis the economic costs both in the short-term and long-term were illustrated. More investment and development in this area would lead to economic savings in the long-term.

P44 HEART PATHOLOGY IN PATIENTS WITH SYNDROME MAROTO-LAMY

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Background Mucopolysaccharidosis type IV (syndrome Maroto-Lamy) is a rare lysosomal storage disorder resulting from a deficiency of arylsulfatase B due to mutations in the gene ARSB and accumulation of dermatansulfate in organs and tissues. Clinical phenotype is very variable. Patients usually have short stature, multiplex dysostosis, facial dysmorphism, corneal clouding, cardiovascular abnormalities and cervical myelopathy.

Methods 117 patient with various types of mucopolysaccharidosis observed in our clinic, 8 patients with mucopolysaccharidosis type VI. The average age of diagnostic of MPS VI in this group patients was 65.43 ± 14.64 months (5 years and 5 months).

Results and discussion We evaluated the level of N-terminal fragment of its prohormone (NT-proBNP) in 30 patients with various types of MPS (23 boys and 7 girls). The reference values for boys was ≤ 62 PG/ml for girls - ≤ 83 PG/ml, mean level of NT-proBNP - 81.63 ± 8.90 (24,53–216,0) PG/ml. the Most frequent, in 66.6% of cases, high level of NT-proBNP - 144.7 ± 42.6 (102,1–187,3) PG/ml, was

identified in children with Maroto-Lamysyndrome. We observed 8 children with MPS VI, all patients had valvular-heart disease. Hypertrophic cardiomyopathy was found in 5 children, pulmonary hypertension was diagnosed in 3 patients. Most often, heart failure we have found in patients with Maroto-Lamysyndrome. Patients with MPS VI is progressive heart disease, which is the most cause of death. Heart failure diagnostic in the initial stages is very important for adequate therapy of hemodynamics disorder and prevent its further progression of cardiovascular problems. NT-proBNP is cardiac biomarker for heart failure management. NT-proBNP is a one of the most predictors of prognosis HF, it help to identify high-risk patients who need cardiologic monitoring and more effective therapy.

P45 PARAMETERS FOR EARLY DETECTION OF CARDIOVASCULAR DISEASE IN MAINTENANCE DIALYSIS PEDIATRIC PATIENTS

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Introduction The excessive mortality seen in patients with end-stage renal disease (ESRD) is closely related to cardiac disease. We aimed to assess if there were distinctive parameters that can early predict cardiac dysfunction in children on maintenance dialysis (MD).

Methods From the ESRD database of our tertiary referral centre (2017–2018), we enrolled all patients on MD. For statistical analysis we used STATA software version 13.

Results Twenty-four patients were on MD: mean age ($\pm$ SD) 14.6 ± 4.7 years, mean duration of MD 3.5 years, 55% male. The study population was divided into two groups: group-1 consisted of patients with cardiomyopathy and group-2 included patients without cardiac dysfunction. The two groups were similar regarding demographic characteristics, cardiovascular risk factors and uremia-related metabolic cardiac risk factors. On univariate analysis, a statistically significant difference was seen in the value of serum albumin ($p=0.049$) and s wave velocity on tissue doppler imaging (TDI) ($p=0.02$). No significant difference between the two groups was found for type of dialysis (hemodialysis or peritoneal dialysis), growth delay, laboratory parameters like homocysteine and NT-pro BNP (and a lot other), ECG parameters.

Conclusions Some echocardiographic parameters such as systolic dysfunction assessed by s wave on TDI are the best tools for early diagnosis of cardiac dysfunction. No ECG parameters were found to predict early dysfunction. There are also bioumoral factors that can alert the clinician regarding cardiac malfunction such low level of serum albumin. Protocols for regular echocardiographic screening, diagnosis and monitoring of heart disease are recommended in the follow-up of these patients in order to provide a proper management of the disease and prevent complications like cardiac disease which is the main cause of morbidity and mortality in children with end-stage renal disease.