G334(P) RISK FACTORS ASSOCIATED WITH IBUPROFEN INDUCED ACUTE KIDNEY INJURY IN THE PAEDIATRIC POPULATION: A SYSTEMATIC REVIEW

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Aims Ibuprofen is commonly used in children. However, its use can be associated with renal adverse effects. This systematic review aimed to determine risk factors associated with ibuprofen induced acute kidney injury (AKI) in the paediatric population.

Methods A systematic review was performed in January 2019 using PubMed and Web of Science. Eligible clinical trials and observational studies included ibuprofen as an intervention in children (0 to <18 years) and reported risk factors associated with AKI.

Results Of 333 publications identified, four were selected for inclusion. In a prospective case-control study of 105 children with dehydration secondary to acute gastroenteritis 44% presented with AKI. Of those who received ibuprofen prior to admission, 54% had AKI. Ibuprofen was an independent risk factor for AKI development ($p < 0.001$, odds ratio 2.47, 95% CI 1.78–3.42). A randomised controlled trial ($n = 288$) compared renal outcomes in children with fever who received ibuprofen or paracetamol. Neither blood urea nitrogen (BUN) or creatinine levels varied significantly by treatment group. However, when comparing dehydrated children to the overall population there was a greater percentage of dehydrated patients with BUN > 6.4 mmol/L (14% v 8.1%) and creatinine levels > 62 μ mol/L (14% v 9.5%). One retrospective case-control study (47803 adverse event reports) found a reporting odds ratio (ROR) for AKI in children receiving Ibuprofen of 2.14 (95% CI: 1.59–2.88). Concomitant use of paracetamol with ibuprofen increased the ROR for AKI to 4.01 (95% CI 2.96–5.43). One retrospective cohort study (2 partially overlapping cohorts: $n = 31561$ and $n = 167523$) compared the risk of renal adverse events with ibuprofen use in children aged < 6 months versus those aged 6–12 months. There was no difference between the groups after adjusting for prior renal impairment (adjusted RR 0.42, 95% CI 0.17–1.08).

Conclusion The findings of this systematic review indicate dehydration and concomitant use with paracetamol are potential risk factors for ibuprofen induced AKI. However, there was a limited number of studies related to the research question and the results are likely to be influenced by confounding factors. Further studies are required to determine the precise risk factors associated with ibuprofen induced AKI in the paediatric population.

G335(P) ABSTRACT WITHDRAWN

G336(P) INPATIENT MANAGEMENT OF MEDICALLY UNSTABLE RESTRICTIVE EATING DISORDERS

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Aims Serious short and long term complications as well as a significant mortality risk result from the prolonged semi starvation associated with restrictive eating disorders unless prompt and early medical treatment and refeeding are provided.

To audit and evaluate the initial medical assessment and the treatment and monitoring of children and adolescents admitted with a medically unstable restrictive eating disorder to a tertiary paediatric centre.

Method The medical records, drug charts and growth and measurement charts of 21 admissions to a tertiary paediatric centre between October 2017 and April 2019 were reviewed retrospectively via an online case notes portal.

Results Of the 21 admissions to a medical inpatient setting, 18 suffered from Anorexia Nervosa (AN), 2 from Avoidant/Restrictive Food Intake Disorder (ARFID) and one was unspecified. 11 patients (52%) had an admission resting heart rate ≤ 50 bpm with 4 ≤ 40 bpm. By the time of discharge all patients had a heart rate > 50 bpm. Mean Body Mass Index (BMI) on admission was 15.7 (79.2% of median for age and sex). At discharge this had risen by 0.7 to 16.4 (82.7% of median). 8 patients (38%) had postural cardiovascular instability on admission but none were unstable by the time of discharge.

In 12 patients (58%) the graduated meal plan system combined with our Unit's standard oral phosphate and vitamin supplements were sufficient, but 9 (42.8%) patients required supplementary nasogastric feeds (range 1–43 days) and 6 (28.5%) required oral potassium supplementation.

2 patients required sectioning under the mental health act to enable adequate refeeding. Clinically significant refeeding syndrome was avoided with this treatment regime. There were no deaths.

Conclusion With prompt, effective nutritional intervention and careful medical monitoring in children and adolescents with medically unstable restrictive eating disorders, it is possible to reverse potentially fatal short term complications and improve clinical parameters. Other studies have shown that early and effective nutritional intervention may also improve long term outcome.

G337(P) RENAL ANGIOPLASTY IN PATIENTS WITH ALAGILLE SYNDROME AND RENOVASCULAR HYPERTENSION: IS IT SAFE AND DOES IT WORK?

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Introduction Whilst renal involvement in Alagille syndrome is common, its manifestation is varied, and bilateral renal artery stenosis is relatively rare. Patients with Alagille syndrome are at increased risk of bleeding and this must be taken into account when planning invasive procedures such as percutaneous transluminal angioplasty (PTA). We reviewed four cases of children with Alagille syndrome and renal artery stenosis who were referred to the renovascular service at a large tertiary paediatric nephrology centre for management of hypertension. We aimed to determine whether PTA was safe and effective