Disclosure(s) Nothing to disclose.

P114 POPULATION PHARMACOKINETICS AND DOSING OPTIMIZATION OF CEFEPIME IN NEONATES

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Objective Cefepime, a fourth-generation cephalosporin, is used in the treatment of severe nosocomial infections in neonates. Pharmacokinetics of cefepime was limited. Therefore, we aimed to study the population pharmacokinetics of cefepime and optimize cefepime regimen in preterm and term neonates.
Methods Blood samples were obtained from neonates treated with cefepime using an opportunistic sampling design. Concentration of cefepime was determined by high performance liquid chromatography. Population pharmacokinetics analysis was conducted using NONMEM software.
Results Sparse pharmacokinetic samples (n=100) from 85 neonatal patients were available for analysis. A one-compartment model with first-order elimination was used to describe the pharmacokinetics of cefepime. Covariate analysis showed that current weight, postmenstrual age and serum creatinine concentration had tremendous influence on pharmacokinetics of cefepime. Monte Carlo simulation indicated that current dosage regimen (30 mg/kg, q12h) was correlated with high risk of underdosing in neonates. To achieve the target rate of 70% of patients get free drug concentration above MIC during 70% of dosing interval, 30 mg/kg q8h was required for all neonates, using susceptibility breakpoint of 4 mg/L.
Conclusion The population pharmacokinetics characteristics of cefepime were evaluated in neonates. Based on simulation, different dosage regimens were required depending on the postmenstrual age and pathogens.
Disclosure(s) Nothing to disclose.

P115 EFFECTS OF THE CLINICAL PHARMACIST'S INTERVENTION ON RATIONALITY OF PARENTERAL NUTRITION

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Objective Through STRONGkids[1 2] (screening tool risk on nutritional status and growth of children) to observe the influences on nutritional indicators and postoperative recovery of different nutritional risk levels of children with intussusception in the use of parenteral nutrition support. Through educating and interventing the doctors to promote the use of parenteral nutrition more reasonable and the hospitalization costs lower.[3]
Methods Children were grouped according to different scores of STRONGkids,[4 5] and each group was divided into two groups A and B according to using parenteral nutrition only or no nutrition support at all. The proportion of the two groups, nutritional indicators and postoperative recovery of the children after surgery were compared to observe the parenteral nutrition usage rate of different groups, and the use of parenteral nutrition was necessary or not. The clinical pharmacist intervened the doctors according to the research results. 1 year later, the indicators above were compared again.
Results There were no significant differences on nutritional indicators and postoperative recovery in 1–2 score groups between group A and B, but the hospitalization cost in group A was significantly higher than that in group B. In 3-score group of children, the decreases of weight, prealbumin and retinol binding protein were more significant in group B than in group A, and the hospitalization days of group A were significantly shorter than group B. The incidence of adverse reactions of using parenteral nutrition was significantly higher. According to above results, the clinical pharmacist instructed doctors to improve the indication of parenteral nutrition according to the relevant guidelines.1 year later, the usage rate of parenteral nutrition dropped in 1–2 score groups. The incidence of adverse reactions and the costs of hospitalization were significantly decreased.
Conclusions The clinical pharmacist played an important role in promoting the rational use of parenteral nutrition.[6 7]

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P116 PROPHYLACTIC USE OF ENOXAPARIN DURING BARIATRIC SURGERY IN ADOLESCENTS WITH SEVERE OBESITY

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Background Severe obesity predisposes adults and youth to a higher risk of venous thromboembolism (VTE). Enoxaparin is frequently used for their VTE management. This study evaluates a BMI-stratified prophylactic dosing regimen of enoxaparin in severely obese adolescents undergoing bariatric surgery.
Methods This prospective study enrolled severely obese adolescents aged 12–20 years undergoing laparoscopic sleeve gastrectomy. Prophylactic enoxaparin was dosed at 40 mg SC (for a BMI less than 50 kg/m^2) and 60 mg SC (for a BMI equal to or greater than or 50 kg/m^2). Blood samples were drawn until 12 hrs post-dose. Plasma Anti-Factor Xa (Anti-FXa) activity was used as a surrogate marker for enoxaparin plasma concentration and pharmacokinetics were assessed using non-compartmental PK analysis. The primary efficacy outcome was the anti-FXa activity 4–6 hours after dosing, and the primary endpoint was the proportion of patients who reached prophylactic anti-FXa activity of 0.1–0.3 U/mL between 4–6 hours after dosing.