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### P35 AN EVALUATION OF CLOPIDOGREL USE IN A CHILDREN'S CARDIOLOGY CENTRE

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**Introduction** Clopidogrel is a medicine that prevents platelet adhesion and is therefore used to reduce the risk of blood clots. In children's cardiology, clopidogrel is usually added in combination with aspirin for patients who have had operations and procedures that carry a higher risk of thrombosis.

In children, there are two major studies that assessed the use of clopidogrel to inhibit platelet aggregation and reduce blood clots; PICOLO<sup>1</sup> and CLARINET.<sup>2</sup> PICOLO showed that a dose of 0.2mg/kg once a day is effective at inhibiting platelet aggregation. CLARINET showed aspirin and clopidogrel had no significant benefit over aspirin monotherapy at preventing blood clots. However, this was in a very specific cohort of patient with complex heart disease. Due to the significant morbidity and mortality associated with blood clots and lack of suitable alternatives, clopidogrel is still used within children's cardiology for patients who have multiple risk factors for blood clots from platelet adhesion.

The aim of this audit was to establish the nature of prescribing of clopidogrel within our specialist centre compared to the published data.

**Method** We collected data retrospectively using the pharmacy dispensing system JAC<sup>®</sup> to identify patients who had received clopidogrel over a two year period from July 2019 to June 2021. Patients were then included if they continued clopidogrel at discharge. Patient characteristics such as weight, indication, dose and administration instructions were gathered from our electronic patient record and made anonymous prior to analysis using Microsoft Excel<sup>®</sup>.

**Results** We identified 8 patients who had been prescribed clopidogrel over the 2 year period. The median average age at the start of treatment was 5.4 years (range 1.1 to 10.7 years), the median average weight was 21.4kg (range 11.7 to 41.6kg) and the median average dose was 0.71mg/kg (range 0.23 to 1.8mg/kg). The indications included shunts (n=3), devices/stents (n=4) and aspirin allergy (n=1). A review of administration instructions for families at hospital discharge found three inappropriate manipulations. This was due to the use of tablets to provide a small dose that was deemed to carry a risk of inconsistent dosing and difficulty for families to administer.

**Conclusion** This project has shown that the use of clopidogrel in our centre was variable and in a non-standard fashion. This is demonstrated by the wide range of doses prescribed and the methods used to administer them. This is likely due to the lack of evidence to guide prescribing in unusual circumstances. As a result, we have written guidance based on this review to encourage safer prescribing, particularly to avoid unsafe and unnecessary manipulation of formulations to give small doses. We also now have an unlicensed liquid available for infants who require small doses. For older children, prescribing of fractions of a tablet (e.g. 18.75mg, 37.5mg) is encouraged.

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### P36 MEDICATIONS GIVEN VIA ENTERAL FEEDING TUBES TO PAEDIATRIC INPATIENTS

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**Aim** Approximately 17,000 children in the UK require nutritional support via enteral feeding tubes,<sup>1</sup> many of whom administer medicines via this route. Availability of medications in an appropriate formulation to ensure safe and effective administration via enteral tubes is limited. European Medicines Agency guidance states that companies should include information in the summary of product characteristics (SmPC) if administration through an enteral tube is very likely.<sup>2</sup>

This project aimed to determine if medications prescribed and administered to paediatric inpatients via enteral tubes were licensed for this route of administration and whether manipulation of the product outside of its product license was required in order to administer via an enteral tube.

**Method** Data was collected in a specialist children's hospital on January 6th 2021. Eligible patients were identified from their electronic patient records and by speaking to the nurse responsible for their care. The medicine and brand used was recorded on Microsoft Excel. The SmPC of each product was reviewed to determine whether it was licensed for children and for administration via enteral tubes. Patients on critical care and oncology wards were excluded due to time constraints. The audit was registered with the hospital's clinical audit department. Ethical approval was not required.

**Results** There were 104 inpatients on the wards included on the day of the audit, 23 of whom (22%) were receiving medication via an enteral feeding tube. A total of 172 medicines were prescribed and administered via enteral tubes to these patients including 72 different medicinal products. Four (5.5%) of the 72 medicines were licensed for administration via this route. Seventeen medicines (24%) were unlicensed products, 8 (11%) of the licensed products were not licensed for children under 12 years of age and 19 (26%) had an age restriction to the license. Twenty eight (39%) were licensed for children of any age. Forty seven (27%) of the 172 medication administrations required manipulation of the medicine before being administered via an enteral tube (29 liquids further diluted (16.7%); 9 capsules opened (5.2%); 8 tablets dispersed in water and a proportion given (4.6%); 1 tablet crushed (0.5%).

**Conclusion** This audit has identified that very few medicines administered to paediatric inpatients via enteral tubes are licensed for this route. Over half of medicines administered via this route are either unlicensed products or not licensed for use in children. Manipulation of medicines prior to administration to children via enteral tubes is regularly required. The lack of age appropriate medicines licensed for use via enteral tubes in children should be highlighted to the pharmaceutical industry and regulators