Clostridium difficile testing in the Paediatric population in NHSGG&C: a retrospective audit.

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Introduction

European and Health Protection Scotland guidelines¹ recommend testing for *Clostridium difficile* infection (CDI) in all diarrhoeal stool specimens in children aged three or above. Since February 2017, Greater Glasgow and Clyde Health Board² have been routinely testing for CDI in all stool specimens in this patient group. We performed a retrospective analysis on risk factors for CDI since the introduction of the new laboratory standard operating procedure.

Methods

Data was extracted from our laboratory TELEPATH system searching for reported confirmed GDH and toxin positive CDI in paediatric patients under 16 years old from May 2012 - Sept 2017. Data was then analysed using clinical information from electronic records as well as microbiology/infection consults recorded on our Clinical Portal system.

Results

16 patients tested positive: 3 were from the community and 13 from the hospital setting (figures 1 and 2). For the hospital-associated patients 3 were considered colonisers and not treated. All other hospital cases were considered significant with some patients experiencing recurrences or relapses. Patients had one or more of the following risk factors: solid organ transplant, haematological or other malignancy, gastroenterology patient, recent antibiotics, other high risk medications such as proton pump inhibitors (figure 3). Patients were treated as per our clinical guidelines: non severe cases received PO metronidazole and severe cases received PO vancomycin.

Discussion and Conclusions

Although our dataset is small, our hospital is Scotland's largest paediatric tertiary referral centre with many cases having significant risk factors for CDI. Our analysis suggests that risk factors such as malignancy, haematological or solid organ transplantation, and gastrointestinal surgery may predispose patients to significant dysbiosis and therefore CDI. Biochemical and haematological parameters alone, even though some of these form part of CDI severity score, cannot replace careful clinical review. Underlying conditions, in particular immunocompromising conditions, are significant risk factors that may lower the threshold for treatment.

Figure 1- No of patients with *Clostridium difficile* Infection 2012-2017

Figure 2 - Age distribution of confirmed *Clostridium difficile* infection

Figure 3 - Risk factors for the 13 Hospital Patients with *Clostridium difficile* infection

References : 1. National Services Scotland. Recommended protocol for testing for *Clostridium difficile* and subsequent culture. October 2016. [Cited 09/05/2018]
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2. NHSGG&C. *Clostridium difficile* infection (CDI) in children (3-16 years) Internal Policy, December 2016. Transmission based precautions. [Cited 09/05/2018]