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## Summer Research Scholar

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Title: Current usage of metronidazole in Pediatric Inflammatory Bowel Disease

**Background:** Metronidazole (Flagyl) is a commonly prescribed antibiotic used to treat a variety of bacterial infections. It is commonly used in pediatric gastroenterology patients to treat small intestinal bacterial overgrowth (SIBO), intestinal abscesses and flares of Inflammatory Bowel Disease (IBD). In studies on IBD flares, specifically Crohn's disease, in the adult population, metronidazole has shown to be an effective treatment. However, the efficacy of metronidazole in the pediatric IBD population has not been conclusively demonstrated. In addition, the indications for diagnosing a flare are not clearly defined, as a flare is difficult to distinguish from bacterial overgrowth, viral infection, or IBS symptoms. While the majority of cases resolve with a course of metronidazole, th

multiple inflammatory markers showed significant improvement after each course. In addition, the IBD subtype does not have a significant impact on metronidazole efficacy shown by the lack of significant changes in inflammatory markers across subtypes. Finally, we found that in patients receiving multiple courses of metronidazole there was less of an improvement in their hemoglobin over time compared to those who only received one course (p=0.0471). In the future, increasing the statistical power by adding more patients to the cohort would be beneficial. It would be interesting to investigate impact of IBD maintenance medications. Determining if patients had symptom resolution after their course and whether another medication such as a steroid was prescribed would provide additional insight into the efficacy of metronidazole in the pediatric IBD population. Our goal is to be able to provide pediatric gastroenterologists better guidelines for administration of metronidazole in the IBD population and minimize unnecessary use of antibiotics.

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