May 14th, 11:30 AM - 1:30 PM

Inpatient Management of Hirschsprung's Associated Enterocolitis (HAEC) Treatment – The Benefits of Standardized Care

Obiyo O. Osuchukwu

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Submitting/Presenting Author: Obiyo Osuchukwu, MD MPH
Primary Email Address: ooosuchukwu@cmh.edu

☐ **Resident/Psychology Intern (≤ 1 month of dedicated research time)**
☐ **Resident/Ph.D/post graduate (> 1 month of dedicated research time)**
X Fellow

Primary Mentor: Rebecca M Rentea, MD

Other authors/contributors involved in project: Wendy Jo Svetanoff MD MPH, Charlene Dekonenko MD, Obiyo Osuchukwu MD MPH, Tolulope A. Oyetunji MD MPH, Pablo Aguayo MD, Jason D. Fraser MD, David Juang MD, Charles L. Snyder MD, Richard Hendrickson MD, Walter S. Andrews MD, Shawn St. Peter MD, Rebecca Rentea, MD

IRB Number: 16070512

Describe role of Submitting/Presenting Trainee in this project: Co-author, assisted in data collection, drafting and critical review of the abstract.

Background: Patients with Hirschsprung's disease (HD) remain at risk of developing Hirschsprung's associated enterocolitis (HAEC) after surgical intervention. Inpatient management is highly variable, with differences in treatments and length of treatment offered. An algorithm directed at standardizing treatment practices was implemented at our institution. This study's aim was to compare the outcomes of patients pre- and post-algorithm implementation.

Objectives/Goal: To compare the outcomes of patients pre- and post-algorithm implementation for inpatient management of HAEC.

Methods/Design: A retrospective institutional review of patients with HD who were admitted for HAEC or suspected HAEC was performed; patients admitted from January 2017 – June 2018 became the pre-implementation group and patients admitted from October 2018 – October 2019 were the post-implementation group. The three months surrounding initiation of the algorithm were excluded. The algorithm included standardization of irrigation practices and antibiotic duration, home teaching and botox injections. Demographics, outcomes, associated comorbidities, inpatient length of stay, and duration of antibiotic treatment were compared between the two groups. STATA® (StataCorp, College Station, TX) was used for analysis; $p < 0.05$ was significant.

Results: Fifty-four patients met criteria; 63 episodes of HAEC (34 pre-algorithm, 29 post-algorithm) occurred during the study period. Twelve patients (22%) had more than one episode. The median age at

pull-through was 135 days (IQR 15, 213); 72% were male and 14.8% had Trisomy 21. The most common levels of the transition zone were the rectosigmoid (42.6%) and descending colon (29.6%).
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Conclusions: Use of a standardized algorithm significantly decreases length of stay and total duration of antibiotics without increasing readmission rates while still providing appropriate treatment for HAEC.

Table 1: Outcomes Following Implementation of a Hirschsprung's Associated Enterocolitis (HAEC) Treatment Algorithm. IQR = inter-quartile range

	lgorithm (n=34)	**Algorithm (n=29)**	**ue**
ions Performed During Admission	%)	%)	
n Duration of All Antibiotics (IQR)	(7, 9)	(5, 9)	
dian Duration of IV Antibiotics (IQR)	(7, 8)	(1, 3.5)	1
dian Duration of Oral Antibiotics (IQR)	(0, 14)	(0, 7)	
Performed Admission			1
n Length of Stay	(4.4, 8.3)	(1.5, 3.8)	1
n Duration from Discharge to Clinic Follow-	ays (13, 42)	's (11, 29)	
colitis Readmission Prior to Clinic Visit	5%)	7%)	