	Document Scope: Hospital-wide Patient Care	
	Document Type: Clinical Practice Guideline Approved on 2021-08-04 Next Review Date: 2022-08-04	
	Cecostomy Tube Insertion	Version: 2

1.0 Introduction

Target Population:


- Children aged 4 - 18 years old who have been diagnosed with severe fecal disorders (functional constipation, Hirschsprung's disease, anorectal malformation, spinal abnormalities); and
- Been referred by their primary physician for cecostomy tube (C-tube) insertion.
- **Exclusions:** patients are to be removed from this pathway if there are significant postoperative complications (eg. peritonitis) or a change in diagnosis.

Target Users:

- Surgeons, residents, fellows, nurse practitioners, and nurses.


2.0 Clinical Recommendations

This pathway is a general guideline and does not represent a professional care standard governing providers' obligations to patients. Care is revised to meet individual patient needs. **Level C: Expert Opinion**

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CECOSTOMY TUBE INSERTION CARE PATHWAY			EXPECTED DATE OF DISCHARGE: 3 DAYS		
	PRE-OPERATIVE in IGT CLINIC	IMMEDIATELY POST-OPERATIVELY	POST-OP DAY # 1	DISCHARGE: POD # 2	
GOALS	1. Patient prepared for IGT 2. Activity as tolerated	1. Afebrile 2. Adequate pain control 3. Activity as tolerated	1. Afebrile 2. Adequate pain control 3. Able to tolerate diet 4. Insertion dry & intact 5. Activity as tolerated	1. Afebrile X 24 hours 2. Adequate pain control 3. Able to tolerate diet 4. Insertion dry and intact 5. Patient/ caregiver teaching completed; and are able to perform flush and dressing change 6. Activity as tolerated	
PHYSICAL EXAM	Obtain history Complete physical exam (including height and weight) Assess vital signs Complete pain assessment (refer to Pain Assessment Guidelines) Obtain accurate in and out Abdominal assessment	Complete pain assessment every 4 hours Ensure child has adequate pain control (Refer to Pain Management Guidelines) Obtain accurate in and out Monitor vital signs q15 minutes X 4; then q30 minutes X 4; then q1 X 4; then every 4 hours Complete abdominal assessment (monitor for peritonitis) Complete wound assessment	Ensure child has adequate pain control (Refer to Pain Management Guidelines) Complete pain assessment every 4 hours Monitor vital signs every 4 hours Obtain accurate in and out Complete wound assessment Abdominal assessment (monitor for peritonitis)		
LABS	Complete CBC with differential Coagulation Electrolytes (Na, K, Ca, Phos, Mg, Ab, Creat, Urea)	As clinically indicated	As clinically indicated		
IV FLUIDS		Administer D5W and 0.9 NaCl with 20mmol KCL/L at maintenance Refer to Fluid and Electrolyte Management Guidelines	Administer D5W and 0.9 NaCl with 20mmol KCL/L at maintenance Maintenance: TKVO once adequate oral fluid intake Refer to Fluid and Electrolyte Management Guidelines		
MEDICATION	Cefoxitin IV on chart to IGT (if allergy: gentamicin & metronidazole) Refer to the s-formulary	Morphine IV bolus PRN Acetaminophen as needed for pain/fever Ketorolac or ibuprofen as needed for pain management	If pain/fever, administer Acetaminophen as indicated Morphine IV bolus PRN Ketorolac or ibuprofen as needed for pain management	If needed, provide prescription for oral medication	
DIET	Bowel preparation at home: 1. 48 hours of clear fluids (apple juice, water, broth, electrolyte replacement drinks) and then NPO 2. Picosulfate sodium-magnesium oxide citric acid (Pico-Salix) at 0900 & 1500 on the day before surgery (refer to s-formulary for dosing)	Ensure patient is NPO	Clear fluids to diet as tolerated to DAT (depending on clinical status)	Diet as tolerated	
CECOSTOMY TUBE (C-TUBE)		C-tube to straight drainage Keep dressing intact for 24 hours then change daily	C-tube to straight drainage Instill 10 ml of saline into C-tube BID	Clamp C-tube at discharge C-tube taped to abdomen Dressing for 2 weeks and then keep site exposed Instill 10 ml of saline into C-tube BID May start previous bowel routine POD # 3 and then previous bowel routine every other day C-tube irrigations to begin POD #10	
INFECTION CONTROL	Patient/family advised of pre-op bath. Wipes to be used upon arrival. Refer to standard work document				
EDUCATION	Provide education to parent and child re: pre-op procedure; provide IGT pamphlet Obtain consent for c-tube Provide c-tube supply list Provide IGT contact information	When diet will be started Review need for pain management Review need for mobility Review need for parental involvement in care	Review care of c-tube & site: 1. Shower: on post-op day 3 days; cleanse insertion site gently with soap and water 2. Bedside RN to teach how to instill 10 mL saline into c-tube 3. Teach how to change dressing Review signs and symptoms of wound infection: 1. Fever 2. Redness around incision 3. Drainage from incision 4. Increasing pain around incision May return to normal daily activities as tolerated	Review when to call IGT office: 1. Site infection 2. Vomiting 3. Fever 4. Abdominal distention/ pain 5. Tube dislodgement Provide information re: IGT follow-up appointment 2 weeks post-op (purpose: removing the retention suture, further education/ trouble shooting) IGT follow-up # 2: 6-8 weeks post op for change of pigtail to a trapdoor Bathing: may have a shower after discharge, no baths until sutures removed	Review post-op day 1 teaching

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3.0 Implementation & Evaluation Plan

3.1 Implementation Plan


- Education and awareness building by General Surgery Program (Surgeons, NPs, fellows, nurse educator) at: fellow orientation (once per year) nursing orientation (every 3 months), and residents orientation (every month).
- Surgeons to communicate any updates in practice to Division of General Surgery and Radiology.
- Radiologists to communicate any updates in practice to Division of General Surgery and Radiology.

3.2 Evaluation Plan

- Length of stay (LOS) evaluation

4.0 References

1. Baker, S., Liptak, G., Colletii, R., Di Lorenzo, C., Ector, W. & Nurko, S. (1999). Constipation in infants and children: evaluation and treatment. *Pediatric Gastroenterology Nutrition*, 29, 612-626.
2. Becmeur, F., Demarche, M., Lacreuse, I., Molinaro, F., Kauffmann, I., Moog, R., Donnars, F. & Rebeuh, J. (2008). Cecostomy button for antegrade enemas: survey of 29 patients. *Journal of Pediatric Surgery*, 1853-1857.
3. Bratzler, D. & Houck, P. (2004) Antimicrobial Prophylaxis for Surgery: An Advisory Statement from the National Surgical Infection Prevention Project. **Clinical Infectious Diseases**, 38, 1706-1715.
4. Cascio, S., Flett, M, De la Hunt, M., Barrett, A. & Jaffray, B. (2004). MACE or caecostomy button for idiopathic constipation in children: a comparison of complications and outcomes. *Pediatric Surgery International*, 20, 484-487.
5. Chait, P., Shandling, B., Richards, G. & Connelly, B. (1997). Fecal incontinence in children: treatment with percutaneous cecostomy tube placement - a prospective study. *Radiology*, 203, 621-4.
6. Chait, P., Shlomovitz, E., Connelly, B., Temple M., Restrepo, R., Amaral J., Muraca, S., Richards, H. & Ein, S. (2003). Percutaneous cecostomy: updates in technique and patient care. *Radiology*, 227, 246-250.
7. Chehab, M.A., Thakor, A., Tulin-Silver, S., Connolly, B.L., Cahill, M.L., ... & Venkatesan, A.M. (2018). Adult and Pediatric Antibiotic Prophylaxis during Vascular & IR Procedures: A Society of Interventional Radiology Practice Parameter Update Endorsed by the Cardiovascular and Interventional Radiological Society of Europe and the Canadian Association for Interventional Radiology. *Journal of Vascular & Interventional Radiology*. In Press.
8. Crawley-Coha (2004). Cecostomy for antegrade continence enemas in children. *J WOCN*, 31, 23-31.
9. Driver, C., Barrow, C., Fishwick, J., Gough, D., Biachi, A. & Dickson, A. (1998). The Malone antegrade colonic enema procedure: outcome and lessons of 6 year's experience. *Pediatric Surgery International*, 13, 370-372.
10. Harrington, L. & Schuh, S. (1997). Complications of fleet enema administration and suggested guidelines for use in the pediatric emergency department. *Pediatric Emergency Care*, 13, 225-226.
11. Khan, W.U., Satkunasingham, J., Moineddin, R., Jamal, I., Afzal, S., Chait, P., Parra, D., Amaral, J.G., Temple, M.J., & Connolly, M.B. (2015). The Percutaneous Cecostomy Tube in the Management of Fecal Incontinence in Children. *Journal of Vascular & Interventional Radiology*, 26(2), 189-195.
12. Lorenzo, A., Chait, P., Wallis, C., Raikhlin, A. & Farhat, W. (2007). Minimally invasive approach for treatment of urinary and fecal incontinence in selected patients with spina bifida. *Pediatric Urology*, 568-571.
13. Malone, P., Curry, J. & Osborn, A. (1998). The antegrade continence enema procedure why, when and how? *World Journal of Urology*, 16, 274-278.
14. Mohamed, H., Wayne, C., Weir, A., Partridge, E., Langer, J., & Nasr, A. (2020). Tube cecostomy versus appendicostomy for antegrade enemas in the management of fecal incontinence in children: A systematic review. *Journal of Pediatric Surgery*, 55(7), 1196-1200. DOI: <https://doi.org/10.1016/j.jpedsurg.2020.01.011>.
15. Mousa, H., Van Den Berg, M., Caniano, D., Hogan, M. & Di Lorenzo, C. (2006). Cecostomy in children with defecation disorders. *Digestive Diseases and Sciences*, 154-160.

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16. Registered Nurses' Association of Ontario. (2013). Best Practice Guideline: Assessment and Management of Pain (Third Edition). <https://rnao.ca/bpg/guidelines/assessment-and-management-pain>
17. Ruzic, A., Gadepalli, S., Gish, J. (2020, November). Surgical Infection. American Pediatric Surgical Association. . https://www.pedsurglibrary.com/apsa/view/Pediatric-Surgery-NaT/829027/all/Surgical_Infection?q=SSI
18. Shandling, P., Chait, P. & Richards, H. (1996). Percutaneous cecostomy: a new technique in the management of fecal incontinence. *Journal of Pediatric Surgery*, 31, 534-7.
19. Wong, A., Kravarusic, D., & Wong, S. (2008). Impact of cecostomy and antegrade colonic enemas on management of fecal incontinence and constipation: Ten years of experience in pediatric population. *Journal of Pediatric Surgery*, 43, 1445-1451.
20. World Health Organization. (2016). WHO global guidelines for the prevention of surgical site infection. <https://www.who.int/gpsc/SSI-outline.pdf?ua=1>
21. Yagmuralu, A., Harmon, C., & Georgeson, K. (2006). Laparoscopic cecostomy button placement for the management of fecal incontinence in children with Hirschsprung's disease and anorectal anomalies. *Surgical Endoscopy*, 20, 624-627.
22. Youssef, N., Barksdale, E., Griffiths, J., Flores, A. & Di Lorenzo, C. (2002). Management of intractable constipation with antegrade enemas in neurologically intact children. *Journal of Pediatric Gastroenterology Nutrition*, 34, 402-405.

5.0 Guideline Group and Reviewers

Guideline Group Membership

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Related Documents:

- [Pain Assessment Guidelines](#)
- [Pain Management Guidelines](#)
- [Fluid and Electrolyte Management](#)
- [Pre-operative Bathing](#)

Attachments:

[cecostomy_v1.pdf](#)