VANDERBILT HEALTH

EMERGENCY GENERAL SURGERY

Practice Management Guidelines: Acute Presentation of New Enterocutaneous Fistula

I. **Background:** The major cause of enterocutaneous or atmospheric fistula is surgical intervention, accounting for 80% of EC or EA fistulas. Other non-surgical etiologies relate to inflammatory conditions such as inflammatory bowel disease, radiation, malignancy, and ischemia. While non-surgical fistulas can be managed in the acute setting according to this PMG, their long-term management differs significantly and, as such, is addressed in this guideline.

EC/EA fistulas have a very high morbidity and mortality rate. They require months to years of wound care and supplemental nutrition, sometimes via parenteral route only. Mortality rates quoted in the literature are between 6% and 33%.

II. **Terminology**

a. Fistula: abnormal connection between two epithelialized surfaces
b. Enterocutaneous fistula: abnormal connection between GI tract and skin
c. Gastrocutaneous fistula: abnormal connection between stomach and skin (often after prolonged gastrostomy tube
d. Enteroatmospheric fistula: abnormal connection between bowel and skin without an epithelialized tract

III. **Classification**

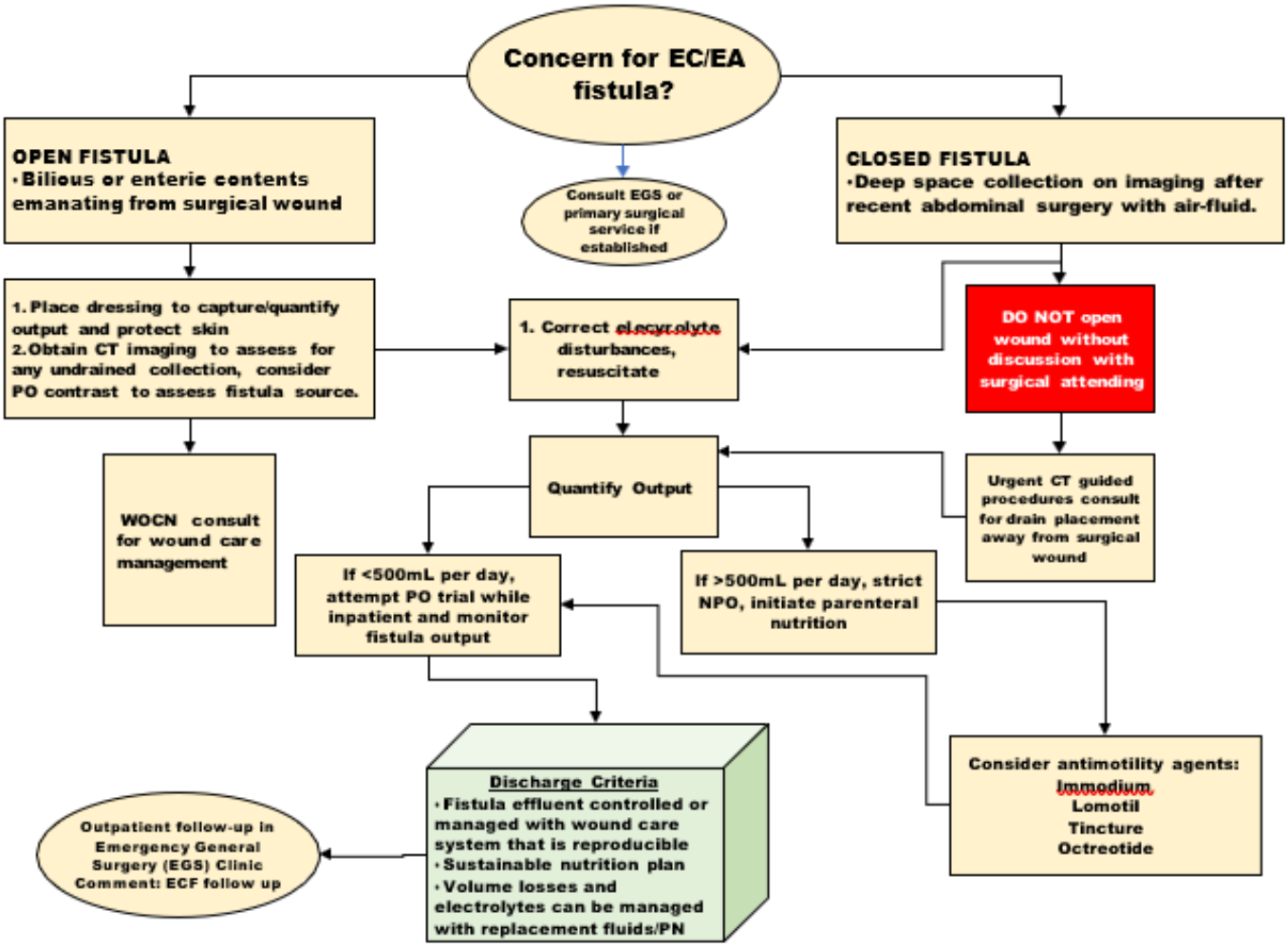
a. Low output: < 200 cc/day
b. Moderate output: 200-500 cc/day
c. High output: > 500 cc/day

IV. **Management**

a. Resuscitate and Replace Electrolytes
    1. Patients with fistulas are subject to large volume losses as well as electrolyte derangements
    2. Patients should be admitted to a stepdown unit unless an ICU admission is appropriate
    3. Hyponatremia, Hypokalemia, and Hypomagnesemia are common electrolyte abnormalities
b. Wound and Skin Protection
    1. Early control of effluent is imperative due to corrosive bowel contents, as skin breakdown will make pouching difficult
    2. Immediate pouching with early WOCN consultation
c. Control Sepsis
    1. Percutaneous drainage can be used to divert effluent from the skin to improve wound care
    2. Antibiotics
        a. If no systemic sepsis or cellulitis, no antibiotics are necessary
        b. If systemic sepsis:
            i. First line: Piperacillin/Tazobactam
            ii. Severe PCN Allergy: Cefepime/Metronidazole

d. Quantify Output
e. Nutrition Optimization
    1. If low-to-moderate output, initiate enteral nutrition
    2. If high output, make NPO and start parenteral nutrition
    3. Gastroenterology/Nutrition Consultation for all patients for outpatient follow-up
f. Operative Management
    1. Patients who present with new enterocutaneous fistulae will rarely benefit from immediate operations
    2. If a patient presents with an associated necrotizing soft tissue injury of the abdominal wall secondary to a fistula, surgical management per NSTI Guideline
    3. Patients whose fistulas fail to resolve with nonsurgical therapy should be considered for elective fistula takedown after reaching adequate nutritional status
g. Nonsurgical Options: Patients be considered for endoscopic and/or percutaneous management of fistulae when these are anatomically feasible

V. Flowchart



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VIII. Revisions:

April 2024, April 2026