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Perforated Giant Meckel Diverticulitis in an elderly patient: Case report and review of the literature

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ABSTRACT

INTRODUCTION: Giant Meckel's diverticula are a relatively rare form of Meckel's, and henceforth their natural history is not clearly defined. They're currently thought of as an infrequent form of ileal dysgenesis. Noted complications include perforation, torsion and bowel obstruction. A much rarer presentation is Giant Meckel's diverticulitis.

CASE: A 71 year old white female presented herself to the Emergency Department of a small urban community hospital, complaining of severe abdominal pain, nausea & vomiting. Her preoperative workup was consistent with Giant Meckel's diverticulitis, with evidence for perforation. She was taken for a laparotomy, which confirmed the diagnosis, and was treated with a small bowel resection. She made an otherwise uncomplicated recovery.

CONCLUSION: Giant Meckel's diverticula and their complications require a high index of suspicion and once diagnosed, they should be managed expeditiously to avoid complications.

1. Introduction

Meckel's diverticulum is an infrequent (2%) form of dysgenesis of the small intestine [1]. It is also an often overlooked cause of abdominal surgical events, since the symptoms upon presentation are frequently undistinguishable from those of other surgical etiologies. When greater than five centimeters in size they're considered "giant", a much rarer variant. A revision of the available English literature (using the search terms "giant" and "Meckel" with the Boolean operator "AND") employing the PubMed database shows a total of 28 reported cases in adults. The most common recorded symptom at presentation is intestinal obstruction (8 cases), followed by symptomatic enteroliths (6 cases) and torsion producing pain and/or gangrene (6 cases). Additional presentations included anemia, including GI bleeding (5 cases), diverticulitis (3 cases) and combinations of the above (11 cases). Below we present the fourth confirmed case of Giant Meckel's diverticulitis without torsion or obstruction.

For the preparation of this case report we followed the recommendations of the ICJME and the Equator Network (available at http://www.equator-network.org/). The formatting of the manuscript follows the surgical extension for the CARE statement (SCARE) [2].

2. Patient information

A 71 year old white female presented to the Emergency Department of a small community hospital in urban Chicago, brought by EMS. Her complaints upon presentation included severe, generalized abdominal pain, nausea and occasional vomiting. The patient stated that she was in her usual state of fair health until about 24 h before admission, when she began experiencing colicky type abdominal pain. During the next few hours the pain intensified, and changed from colicky to continuous, becoming generalized about 2 h before she summoned the emergency response systems (Chicago Fire Department). On presentation she had vomited twice what appeared to be bilious emesis. Her past medical history was significant for Hypertension, for which she was receiving metoprolol tartrate (Toprol XL, AstraZeneca LP, Wilmington DE) 25 mg PO every day and non-insulin dependent Diabetes, that she controlled with diet. She has never received an operation before. She denied any allergies. Her social history was negative for tobacco, alcohol abuse or recreational drugs. Family history was only significant for hypertension.

On physical examination the patient was awake, alert and oriented in person, time, place and situation. Her chest was clear and her heart had a regular rate and rhythm with no murmurs. Her abdomen was distended and firm on palpation in all four quadrants. The surgical consultant elicited guarding and rebound tenderness. Her bowel sounds were present but much diminished. Rectal exam showed no feces on the ampulla. Her external genitalia were normal

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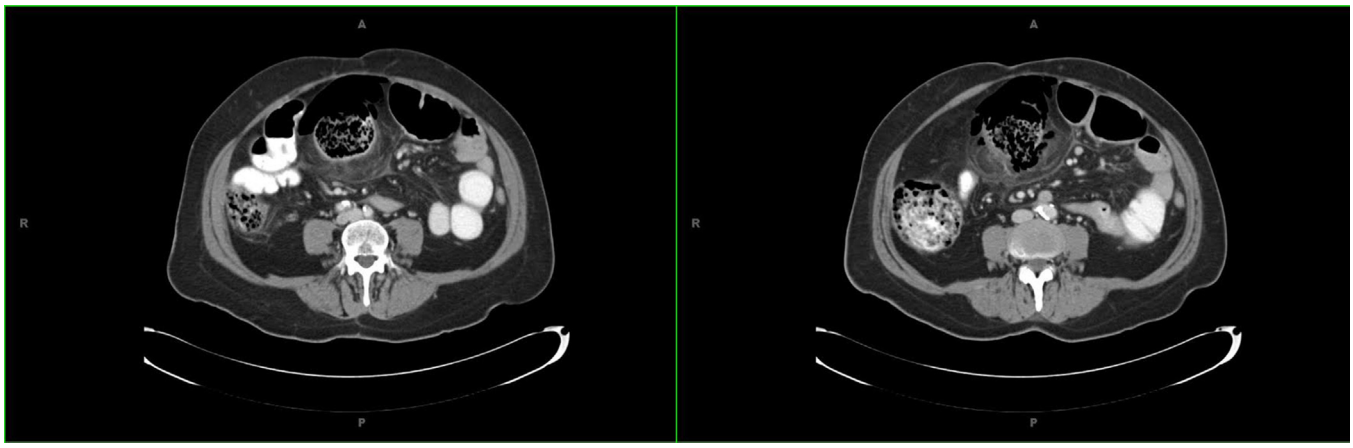

Fig. 1. Preoperative CT scan of the abdomen and pelvis showing a large central mass with inflammation and evidence of contained perforation.

for her age and sex. A formal vaginal exam was dispensed with given the condition of the patient. Her extremities showed no edema. A brief neurological evaluation was unremarkable.

A Foley catheter was inserted and drain scant, dark urine. Her blood work was only remarkable for a White Blood Cell count of 19,500 with a left shit. Her hemoglobin, hematocrit and platelet count were all within normal limits. Her electrolytes were unremarkable, as was her amylase and lipase. A CT scan of the abdomen and pelvis was obtained prior to surgical consultation, which showed a central inflammatory mass, surrounded by small bowel with evidence of intramural air and possible perforation (Fig. 1). She was promptly taken to the Operating Room for surgical exploration.

3. Surgical technique

Once general anesthesia was induced a generous midline incision was carried down to the peritoneal cavity, were a large mass was found, and determined to be arising from the ileum, without

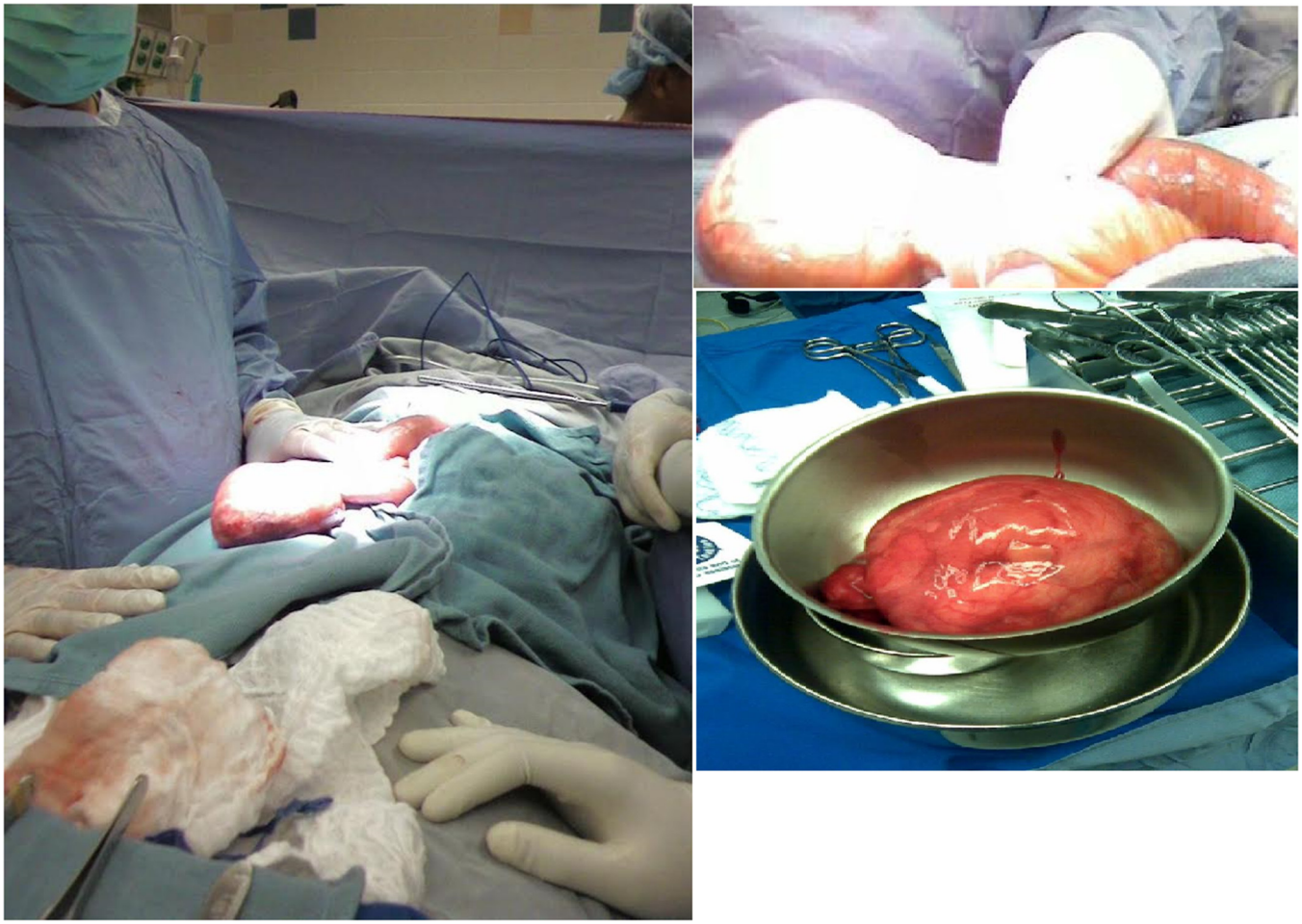

Fig. 2. During the laparotomy a large spherical, pedunculated mass arising from the distal ileum with evidence of inflammation and perforation, consistent with Giant Meckel's diverticulitis.