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Case Report

Surgical management of intestinal obstruction due to a Mazuji III adhesion in a geriatric patient: dilemma in the management of an incidental Meckel's diverticulum

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ABSTRACT

The management of an incidentally discovered Meckel's diverticulum (MD) during emergency surgery poses a significant dilemma in unstable geriatric patients. We report the case of a 77-year-old critically ill female with multiple comorbidities who underwent emergency laparotomy for an intestinal obstruction caused by a Mazuji type III band adhesion. An uncomplicated MD was found incidentally. Given the patient's hemodynamic instability and severe metabolic acidosis, and adhering to damage control surgery principles, the decision was made not to resect the MD to avoid prolonging operative stress. This case highlights the conflict between classic teaching advocating for prophylactic resection and a conservative, individualized approach in high-risk patients. We discuss the literature, which suggests a low long-term risk of complication from incidental MD in adults, potentially even lower in the elderly, and argue that in such scenarios, the immediate surgical risk outweighs the potential future benefit. This report reinforces the principle of "first, do no harm" and underscores the necessity of tailored surgical decision-making that prioritizes physiological stabilization in complex emergency settings.

Keywords: Meckel's diverticulum, Incidental finding, Geriatric surgery, Damage control surgery, Surgical decision-making, Intestinal obstruction

INTRODUCTION

Meckel's diverticulum (MD) is the most common congenital anomaly of the gastrointestinal tract, with a prevalence of 2% in the general population.[1] While the majority of cases remain asymptomatic, between 4% and 6% present with complications such as bleeding, obstruction, diverticulitis, or perforation.[2]

The vast majority of these complications occur in the pediatric population, with symptomatic presentation in geriatric adults being exceptionally rare.[3] The management of an incidentally discovered MD during laparotomy is a subject of debate, particularly in elderly patients with significant comorbidities, where evidence supporting prophylactic resection is limited.[4]

The case of a geriatric patient is presented with multiple comorbidities who underwent emergency surgery for acute obstructive abdomen and severe hemodynamic instability, in whom the intraoperative finding of an uncomplicated MD presented a management dilemma.

CASE REPORT

A 77-year-old female with a medical history of right heart failure, arterial hypertension, chronic obstructive pulmonary disease (COPD) requiring supplemental oxygen, obstructive sleep apnea syndrome (OSAS), and chronic atrial fibrillation on anticoagulant therapy presented to the emergency department. She reported a three-day history of generalized cramping abdominal pain,

progressive abdominal distension, and absence of bowel movements or flatus.

On admission, she exhibited hemodynamic instability (BP 70/60 mmHg, HR 114 bpm) and respiratory insufficiency (RR 26 rpm). Physical examination of the abdomen revealed a distended, tympanic abdomen with generalized rigidity and signs of peritoneal irritation (Figure 1).

Figure 1: Abdominal radiograph in the supine position, showing fecal impaction in the descending colon and rectal ampulla, with dilated intestinal loops and a "stack of coins" appearance. No findings suggestive of hollow viscus perforation.

Laboratory studies showed leukocytosis with neutrophilia, hyperkalemia, elevated creatinine, and an arterial blood gas analysis consistent with severe lactic metabolic acidosis (pH 7.23, lactate 9.5 mmol/l), indicative of tissue hypoperfusion.

Figure 2: Intraoperative view of the incidental finding. A 3×1.5 cm Meckel's diverticulum is seen on the antimesenteric border of the ileum, 60 cm from the ileocecal valve, with a normal serosal appearance and no acute pathology.

With a presumptive diagnosis of acute obstructive abdomen complicated by distributive/hypovolemic shock in the context of intestinal obstruction, an emergency exploratory laparotomy was performed. Intraoperative findings documented the presence of 1000 ml of free serous inflammatory fluid in the abdominal cavity, a firm Mazuji type III adhesion located 20 cm from the ileocecal valve as the cause of the obstruction—which was released—and, incidentally, a Meckel's diverticulum located 60 cm from the ileocecal valve, showing no signs of acute inflammation, necrosis, or hemorrhage (Figure 2).

Considering the patient's critical condition, persistent hemodynamic instability, and the resolution of the obstructive cause, the decision was made not to resect the incidental Meckel's diverticulum. The procedure was concluded, and the patient was transferred to the intensive care unit.

DISCUSSION

The core of our discussion lies in the justification for not resecting an incidental MD in a critically ill geriatric patient with hemodynamic instability. Our intraoperative decision prioritized the principle of "first, do no harm" and damage control surgery. The patient presented with an extremely compromised physiology; any additional minute of anesthesia and surgical manipulation increased the risk of multiorgan failure and death.[5] The practical application of this principle was to perform only the essential procedure to control the source of obstruction and hypoperfusion the release of the obstructive adhesive band and to expediently conclude the surgery. Resection of the MD, not being a vital procedure, represented an unjustified risk.

Our approach finds support in the literature, although it is limited. Authors such as Park et al and Dumper et al have noted that the risk of complications from an incidental MD in adults is low (estimated between 2.5% and 4.2%).[1,3] More importantly, Stone et al suggest this risk may be even lower in older adults.[6] However, an area of disagreement exists, as classical guidelines, based on studies of younger populations, recommend prophylactic resection if the patient is stable.[2] Our case aligns with the more contemporary view advocating for individualized management, particularly when resection carries a substantial added risk.[4,7] The inconsistency in the literature reinforces the need for judicious clinical judgment. This case underscores the necessity for studies analyzing the long-term outcome of geriatric patients with non-resected incidental MD. It would be valuable to develop a management guideline based on factors such as age, comorbidities, and hemodynamic stability to help standardize decision-making in this infrequent surgical dilemma.

CONCLUSION

In light of the available evidence and the presented clinical context, we conclude that the decision not to resect the incidental Meckel's diverticulum in our critically ill 77-year-old patient was a prudent and justified course of action. This case reinforces the principle that MD management must be individualized and that, in unstable geriatric patients, the benefit of prophylactic resection is

outweighed by the immediate surgical risk. Prioritizing control of the obstructive/hypoperfusion focus and minimizing physiological insult should be the fundamental pillars in managing these complex clinical situations.

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