Bubble Wrap Colon: A Case Report of Benign Pneumatosis Intestinalis

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Introduction

Pneumatosis intestinalis (PI) is characterized by gas within the bowel wall and may involve any portion of the gastrointestinal tract.

While PI can indicate life-threatening bowel ischemia, it may also be benign.

Differentiating between these entities is critical, as management ranges from urgent surgery to conservative therapy.

Case Description

A 67-year-old man with oral cavity squamous cell carcinoma who underwent tracheostomy, glossectomy, mandibulectomy, bilateral neck dissection, and free flap reconstruction, complicated by wound dehiscence and fistula requiring debridement

He subsequently required gastrostomy tube placement by radiology

Two months later post-operatively, a CT scan obtained for worsening abdominal distention showed pneumoperitoneum and right colonic pneumatosis concerning for ischemia and perforation

Figure 1. CT scan showing pneumoperitoneum and pneumatosis of ascending colon

Case Description (cont.)

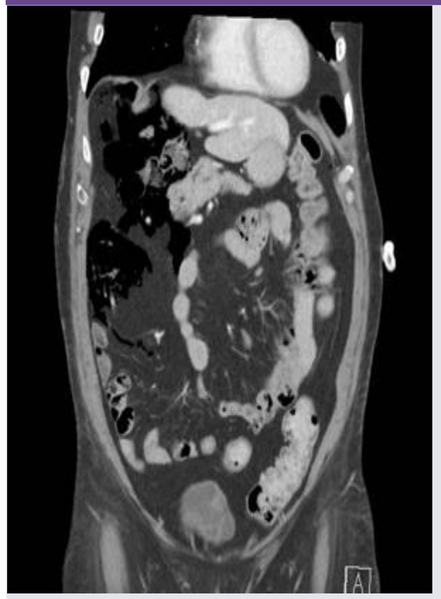

Figure 2. CT scan showing pneumoperitoneum and pneumatosis of ascending colon

Despite these findings, he remained hemodynamically stable, with benign abdominal exam and normal laboratory values.

However, given the discordance between imaging and clinical findings, diagnostic laparoscopy was performed.

Figure 3.
Pneumatosis of the ascending colon

Intraoperatively, extensive pneumatosis was noted in the cecum, ascending colon and omentum.

Bowel appeared pink and viable without evidence of ischemia or perforation.

The gastrostomy tube was noted to be intact and within the stomach

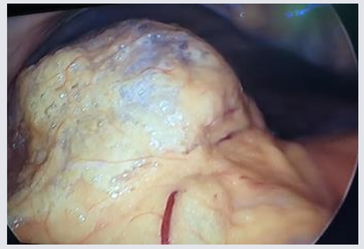

Figure 4.
Pneumatosis of the omentum

Discussion

Pneumatosis intestinalis presents a diagnostic challenge, as it may benign or may represent ischemic bowel.

Clinical correlation is essential as patients with peritonitis, leukocytosis, or acidosis warrant exploration, while stable patients may be managed conservatively.

In this case, diagnostic laparoscopy confirmed benign pneumatosis preventing unnecessary laparotomy.

Antibiotic therapy and elemental diets have been reported to facilitate resolution in non-ischemic cases

Case Description (cont.)

Post-operatively, the patient was treated with metronidazole and elemental tube feeds for fourteen days.

Abdominal exam remained benign, and CT scans obtained during his hospital stay showed progressive improvement with complete resolution of pneumatosis by postoperative day 39.

He was discharged home on postoperative day 53 after completing adjuvant radiation therapy.

References

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2. Wayne E, Ough M, Wu A, et al. Management algorithm for pneumatosis instestinalis and portal venous gas: treatment and outcome of 88 consecutive cases. J Gastrointest Surg. 2010;14:437-448