Colonic casts: unexpected complications of colonic ischaemia

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ABSTRACT

INTRODUCTION Extensive colonic ischaemia can result in passage of a colonic ‘cast’ (CC) through the rectum.

CASE STUDY We report a 69-year-old male who initially underwent surgery to remove a sessile polyp. On postoperative day (POD) 15, he was febrile, suffering from diarrhoea, and was treated conservatively. On POD18, the patient returned to our hospital with a CC that presented after defaecation. Computed tomography of the abdomen revealed a CC extending from the descending colon to the anal orifice with presentation of air between the affected colonic wall and the CC. The patient was treated conservatively and discharged on POD20 without complications having passed the CC (≈80cm) completely and becoming afebrile.

CONCLUSIONS In most cases, the cause of CC passage is surgery for colorectal cancer or repair of an abdominal aortic aneurysm. A mild-to-severe presentation is dependent upon the bowel-wall layers affected by ischaemia and which therefore are included in the CC.

KEYWORDS

Colonic cast – Colorectal surgery – Ischaemia

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Case Report

A 69-year-old male presented after scheduled colonoscopy which revealed a sessile polyp of the rectum (≈2cm). The patient underwent a lower anterior resection, while the inferior mesenteric artery was ligated with an end-to-end colonic anastomosis. Histopathology of the resected part revealed the polyp to be a tubulovillous adenoma of medium–high-grade dysplasia. Multiple sessile hyperplastic polyps and foci of chronic inflammatory processes were present. The patient was discharged after an uneventful postoperative recovery.

On the postoperative day (POD)15, he was febrile, suffering from diarrhoea, and was treated conservatively. On POD18, the patient returned to our hospital with a colonic cast (CC) that presented after defaecation (Fig 1). The patient was fit and well, with complete blood count and serum biochemistry within normal values. Computed tomography of the abdomen revealed a CC extending from the descending colon to the anal orifice with presentation of air between the affected colonic wall and the CC. A colonoscopy was done which showed apoptosis of cells within the colonic mucosa (Fig 2). Histopathology of the CC showed that only mucosal and submucosal layers were affected. The patient was treated conservatively and discharged on POD20 without complications

having passed the CC (≈80cm) completely and becoming afebrile, but still experienced several episodes of diarrhoea.

Discussion

CC passage was reported first by Speakman and Turnbull¹ in 1984 and only 25 cases have been reported since.^{2–4} It is a rare manifestation of compromise of the bowel circulation and consequent ischaemic colitis. Surgical procedures as well as various circulatory/systemic disorders have been reported to cause ischaemic colitis presenting with CC passage.² In most cases, the cause of CC passage has been attributed to surgery for colorectal cancer or repair of an abdominal aortic aneurysm, with ligation of the inferior mesenteric artery or feeding vessels of the bowel. Approximately one-half of cases have presented with minor symptoms apart from a CC.⁵ In other cases, patients have presented with discomfort/pain in the abdomen, diarrhoea, hyperpyrexia, tenesmus or bowel obstruction.⁵ This variation in presentation might be explained by the bowel-wall layers affected by ischaemia, and therefore are included in the CC. If only the mucosal and submucosal layers are affected, then symptoms tend to be mild and conservative treatment is often effective.^{2,5} In the remainder of cases, in which the muscularis propria is affected, severe symptoms

Figure 1 A colonic cast revealed after defecation

Figure 2 Colonoscopy showing the intraluminal appearance of the colonic cast

are evident and excision of the affected bowel segment is often necessary.² In 2014, Abe and colleagues proposed a clinical pathway to address this rare condition, but this algorithm has yet to be validated.²

References

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