Online Case Report

Heavy rectal bleeding secondary to the passage of a rectal leiomyoma per anus

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Leiomyoma of the rectum is rare and this is the first case reported where such a tumour has passed per rectum, resulting in heavy bleeding. The management of the acute surgical problem as well as rectal leiomyoma per se is discussed.

Key words: Leiomyoma – Rectum – Rectal bleeding

Leiomyomas of the rectum are rare (1 in 2000–3000 of rectal tumours¹) and typically present in 40 to 60-year-old individuals, more frequently in males (male:female ratio = 1.5–2.0:1).^{2,3} They originate from either the muscularis mucosa or muscularis externa and are usually identified in the distal rectum (87% are 8 cm from the anal verge²). Those arising from the muscularis mucosa are typically small polypoidal (< 1 cm diameter), clinically impalpable lesions, similar to metaplastic polyps, identified incidentally in patients having sigmoidoscopy for a variety of anorectal conditions. In contrast, the larger (0.5–20 cm diameter) leiomyomas arising from the muscularis externa generally present with minor rectal bleeding, perineal discomfort/tenesmus, symptoms consistent with rectal stenosis (cylindrical shaped stool, constipation) or a rectal mass.^{2,3} This is the first recorded case where such a tumour has passed intact per anus.

Case report

A 53-year-old Caucasian hypertensive male presented with a 6-week history of passing small amounts of fresh red blood per rectum. This was separate from the stool and not associated with other colorectal symptoms. He

was otherwise fit and well with no systemic symptoms or weight loss. General and abdominal examinations were unremarkable but rectal examination revealed a 5 cm x 2 cm mobile mass in the posterior wall of the rectum, 6 cm from the anal verge. Flexible sigmoidoscopy and biopsy suggested that the overlying mucosa was both macroscopically and histologically normal and thus an MRI was performed (**Fig. 1A**). This confirmed the size and position of the mass as well as the absence of mesorectal lymphadenopathy and an ultrasound-guided transrectal trucutTM biopsy was performed without incident. However, 1 week later the patient re-presented as an emergency with heavy rectal bleeding. He had developed tenesmus over the previous 24 h and subsequently passed a 5-cm diameter mass per rectum (**Fig. 2**). Clinically, he was hypovolaemic (pulse 60 bpm, BP 100/50) and pale (Hb 6.3 g/dl) and continued to bleed heavily per rectum. Therefore, a sengstaken tube was inserted and the gastric balloon inflated with 200 ml of cold water providing an effective tamponade and allowing adequate resuscitation. After 7 units of blood, the patient was normovolaemic and had a haemoglobin of 11.5 g/dl. Pathological assessment of the mass passed per rectum suggested that this was a well-circumscribed 5-

Figure 1 T-2 weighted MRI of rectum in sagittal plane before (A) and after (B) extrusion of the leiomyoma.

Figure 2 The rectal leiomyoma following its passage per anus.

cm diameter leiomyoma that had ulcerated through normal rectal mucosa, remnants of which remained. Twenty-four hours later when the sengstaken tube was removed, there was no further rectal blood loss and after a 48-h period of observation the patient was discharged. In view of the possibility of incomplete tumour extrusion, the patient was re-examined and had a further MRI scan 2 months later. Clinically, there was no evidence of residual tumour and radiologically, although there was some minor thickening of the rectal wall, there was no evidence of residual/recurrent tumour (**Fig. 1B**). These assessments will be repeated after 6 months and long-term follow-up planned thereafter.

Discussion

This is the first recorded case where a rectal leiomyoma has passed per anus. Although possible, it seems unlikely that this was a spontaneous event. A more plausible explanation is that it was precipitated by a post-biopsy extracapsular bleed that compressed the leiomyoma causing it to ulcerate through the rectal mucosa and thereafter pass per anus. In

view of the size of the tumour, the gastric balloon of a sengstaken tube provided both a novel and effective technique to tamponade the significant haemorrhage accompanying this, allowing resuscitation and avoiding the need for emergency surgical intervention.

The major problem in the management of most patients with smooth muscle tumours of the rectum is the difficulty in distinguishing leiomyomas from leiomyosarcomas. The presence of metastases is diagnostic but in their absence, tumour size (diameter > 5 cm) and a rapid mitotic rate (5 mitoses per 10 high-power fields) are often considered the most consistent characteristics associated with leiomyosarcomas. Other features include ulceration of the rectal mucosal,¹ tumour cell necrosis, hypercellularity and cellular atypia/pleomorphism.⁴ However, the absence of these characteristics does not exclude malignancy, particularly in small biopsy samples. Rectal leiomyomas can recur locally despite excision and may also develop malignant characteristics.^{5,6} Furthermore, leiomyosarcomas are relatively insensitive to both chemo- and radiotherapy. Thus, leiomyomas should be removed surgically. Although one small study reported no local recurrence after local excision,¹ the majority of reports suggest that this remains a significant risk (> 30% of cases).^{6,7} Of the 18 tumours arising from the muscularis externa in the St Mark's series, 6/10 excised locally recurred compared with none of those treated by radical surgery (A-P excision).³ Therefore, radical surgery is advocated for all but the smallest tumours (< 1 cm diameter) in order to maximise the chances of a long-term cure.^{2,3}

In the case described above, there was no clinical or radiological evidence of residual leiomyoma 2 months after its passage per anus. Thus a radical surgical approach with its morbidity and probable permanent colostomy did not seem justifiable. Therefore, after appropriate patient counselling, regular clinical and radiological follow-up has been arranged in order to allow early identification of recurrent disease and adoption of a radical surgical approach should this prove necessary.

References

1. Anderson PA, Dockerty MB, Buie LA. Myomatous tumours of the rectum (leiomyoma and leiomyosarcomas). *Surgery* 1950; **28**: 642–50.
2. Sasaki K, Gotoh Y, Nakayama Y, Hayasaka H, Ishiyama Y, Miyashita H. Leiomyoma of the rectum. *Int Surg* 1985; **70**: 149–52.
3. Walsh TH, Mann CV. Smooth muscle neoplasms of the rectum and anal canal. *Br J Surg* 1984; **71**: 597–99.
4. Berridge DC. Leiomyosarcoma of the rectum. Report of 2 cases illustrating an unusual presentation and the need for repeated biopsy. *Dis Colon Rectum* 1987; **30**: 721–2.
5. Neuman Z. Leiomyosarcoma of the rectum, developing from benign leiomyoma. *Ann Surg* 1952; **135**: 426–30.
6. Vorobyov GI, Odaryuk TS, Kapuller LL, Shelygin YA, Korniyak BS. Surgical treatment of benign myomatous rectal tumours. *Dis Colon Rectum* 1992; **35**: 328–31.
7. Kusminsky RE, Bailey W. Leiomyomas of the rectum and anal canal. Report of six cases and review of the literature. *Dis Colon Rectum* 1977; **20**: 580–90.