Anorectal Leiomyoma : Case Report of Rare Tumor with unusual Presentation

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Abstract Gastrointestinal stromal tumour (GIST) is a rare tumour of gastrointestinal tract, comprising of 0.1–3.0% of all gastrointestinal malignancies. They are commonly found in stomach (60–70%), very rarely in rectum and anal canal (<5%). The present case report is of a large anorectal leiomyoma (142×80mm) arising from posterior rectal wall, with its unusual presentation of urinary retention. In our case, in view of its massive size, recurrence and malignant transformation, we planned abdominoperineal resection. Although size and histological grade play an important role, complete resection still is considered the most significant favorable prognostic factor.

Keywords Leiomyoma · Gastro-intestinal stromal tumor · Urinary retention

Introduction

Gastrointestinal stromal tumour (GIST) is a rare tumour of gastrointestinal tract, comprising of 0.1–3.0% of all gastrointestinal malignancies. They are commonly found in stomach (60–70%), very rarely in rectum and anal canal (<5%) [1, 2].

The present case report is of a large anorectal leiomyoma (142×80 mm) arising from posterior rectal wall, with its

unusual presentation of urinary retention. We believe this to be the first case reported till date with such presentation.

Case history

40 years old male farmer, presented with history of constipation since one year and prostatism since seven days, following this he developed acute retention of urine. No other constitutional symptoms or any significant medical history were present. Indwelling catheter was put in, which drained 1500 cm³ of urine. After bladder decompensation, an ill defined mass was felt in suprapubic area, rest of abdomen was normal. Proctologic assessment revealed mildly enlarged prostate anteriorly and a firm smooth mass in presacral area about 3 cms from anal verge. Although this mass did not invade the rectum but was palpable just contiguously to posterior rectal wall. Serum PSA levels were 3.8 ng/ml and rest of routine tests were within normal limits. Ultrasonography revealed well defined mass posterior to urinary bladder about 121 x 88 x 94 mm likely to be prostatic mass (Fig. 1). Core needle biopsy from prostate revealed benign prostatic hyperplasia and from mass revealed leiomyoma (Fig. 2a).

Computed tomography (CT) showed large mass with necrotic areas, possibly arising from posterior rectal wall in presacral region measuring 142 x 99 mm in size. Mass was seen at 32 mm from anal verge displacing urinary bladder anteriorly with mild bilateral pelvicaliectasis. Minimal enhancing diffuse thickening of urinary bladder was noticed (Fig. 3). Magnetic resonance image (MRI)

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Fig. 1 Ultrasonography showing large well defined hypo echoic mass with areas of central necrosis lying posterior to urinary bladder

Fig. 2 **a** High power view shows interlacing bands of spindle shaped cells with blunt ended nuclei and no atypical cells evident. **b** Low power view of leiomyoma stained with Von Gieson stain confirming expression of its smooth muscle origin

Fig. 3 Axial post contrast and sagittal CT images showing large, well defined, central necrotic, presacral mass lesion arising exophytically from posterior rectal wall, displacing rectum and urinary bladder anteriorly

Fig. 4 Coronal T1W and sagittal T2W MRI images showing well defined soft tissue intensity mass lesion arising from posterior rectal wall, appearing heterogeneously isointense with hyperintense areas on T1W sequence and iso to hyper intense on T2W sequence. It reveals prominent necrotic and cystic areas

findings were absolutely similar to those described by CT scan (Fig. 4).

Under general anesthesia, Abdominoperineal resection was done. Macroscopic and histological analysis revealed features of a benign leiomyoma (smooth muscle GIST) (Figs. 5 and 2b).

Discussion

Gastrointestinal stromal tumour (GIST) is a rare tumour of the gastrointestinal tract, commonly found in stomach (60%–70%) followed by the small intestine (20%–25%) and rectum (5%). Rectal GISTs make up 0.1% of all tumours originating in the rectum [1, 2]. Reviews by Hatch et al. [3] revealed that Anorectal leiomyomas predominately occur between 40 and 59 years of age with a significant male predominance (71%). Rectal leiomyomas often present as intraluminal polypoid masses. Tumor size of leiomyomas was <5 cm in 47.3% cases and only 5 cases grew up to 15 cm (3.8%). The signs and symptoms of smooth

muscle tumors can be understood on the basis of their size and position in the anorectal wall. The most common symptoms are bleeding, palpable mass, rectal pain. Single case reported with dysuria and none with retention.

Anorectal leiomyoma in our case was large (142×80 mm), exophytically located in posterior rectal wall. Patient presented with prostatism and retention of urine as an unusual presentation, not reported till date in literature. This was all due to mass effect on bladder, urethra and prostate. Evidences of prostatism with anterior rectal wall leiomyoma have been reported [4]. Local recurrence appeared problematic in anorectal smooth muscle tumors, both for benign and malignant cases. Fourteen Leiomyomas apparently recurred in a series after initial surgical removal, ten of them as Leiomyosarcomas [5]. Vorobyov et al. [6]. reported treatment of 36 rectal leiomyomas from 1972 to 1990 in Moscow, based on tumour size. Abdominoperineal extirpation and abdominoanal resection of the rectum was performed in 7 patients with tumors measuring 8 to 20 cm. Recurrences and malignant transformation were noted in 9 patients after transanal, pararectal, or transvaginal excision of leiomyomas

Fig. 5 Macroscopic vision of opened mass with resected retroanal segment

but none with Abdominoperineal resection. Radical surgery is indicated for local recurrence of benign tumors and treatment of larger (>5 cm) and malignant rectal leiomyomas [7, 8].

In our case, in view of its massive size, recurrence and malignant transformation, we planned abdominoperineal resection. Although size and histological grade play an important role, complete resection still is considered the most significant favorable prognostic factor.

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