Rare disease

Piriformis muscle metastasis from a rectal polyp

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Summary

Rectal cancers constitute over a quarter of all colorectal cancers. Spread of rectal cancer is usually to liver, lung and brain from high risk rectal cancers. Cases have rarely been reported of spread to soft tissue structures. Here we present a case of metastatic spread of a previously excised, early invasive adenocarcinomatous polyp to piriformis.

BACKGROUND

An approach to complex rectal pathologies not only requires a systematic and thorough method to investigating patient symptoms but also integration of multiple disciplines to diagnose rare and challenging conditions. Utilising this approach we present, to our knowledge, the first reported case of metastasis to piriformis from a previously excised rectal polyp.

CASE PRESENTATION

A 67-year-old female retired midwife underwent colonoscopy following bowel cancer screening. She had experienced some bleeding per rectum but had no associated symptoms, significant medical history, regular medications or allergies. She had a 40 mm sessile rectal polyp, which extended anteriorly from 9:00 to 16:00 h at the dentate line, removed during examination under anaesthesia (EUA). No perforation was noted. The polyp was reported as a tubulovillous adenoma with a narrow rim of normal mucosa (exact margin not specified). There was one focus of high-grade dysplasia with a few glands extending into muscularis mucosae. It was reported as Kikuchi level sm1.

Five months later, she developed left buttock pain. Examination of the spine and limbs was normal. Sigmoidoscopy revealed scar tissue and no polyp recurrence. CT showed a small right ovarian cyst and mild arthritis in the spine. Three months later although the buttock pain had eased the patient had had some intermittent constipation and painless blood staining on wiping for 3 weeks prior. Proctoscopy showed recurrence of the polyp and subsequent EUA and submucosal polypectomy was performed. This was reported as a tubulovillous adenoma with low-grade dysplasia and no evidence of invasion. The patient remained symptom free for 14 months.

The patient then presented to the surgical admissions unit with a 5-week history of deep pelvic and left buttock pain. Routine blood tests and tumour markers were normal. MRI of the spine, orthopaedic and gynaecological assessment revealed no attributable diagnosis. CT and MRI abdomen and pelvis confirmed the presence of a 21×18×28 mm collection in relation to the infero-medial border of the left piriformis muscle (figure 1) with

surrounding inflammatory change and appearance suggestive of myositis. There was no evidence of fistulas or sinus tracts. A CT-guided biopsy of the mass was performed after multidisciplinary team (MDT) review and subsequent histology demonstrated non-malignant inflammatory change.

Interim treatment by the pain clinic failed and due to ongoing pain a repeat CT and MRI were performed 3 months later. Enlargement of the piriformis mass was seen (figures 2 and 3). After further MDT review, a repeat biopsy confirmed metastatic adenocarcinoma consistent with colonic origin. CT chest, bone scan, gastroscopy and repeat colonoscopy were all normal.

INVESTIGATIONS

- ▶ Blood tests, including tumour markers
- ▶ CT (including guided biopsies)
- ▶ MRI
- ▶ Colonoscopy and gastroscopy
- ▶ Bone scan
- ▶ Histopathological assessment

Figure 1 Axial pelvic CT scan showing a left piriformis mass prior to first biopsy.

Figure 2 Axial pelvic CT scan showing enlargement of the left piriformis mass.

DIFFERENTIAL DIAGNOSIS

- ▶ Colorectal: diverticular disease and inflammatory bowel disease
- ▶ Angiodysplasia, ischaemic colitis and Meckel's diverticulum
- ▶ Anal fissures, rectal ulcers and haemorrhoids
- ▶ Gynaecological: pelvic inflammatory disease, endometriosis, ovarian cysts and torsion
- ▶ Musculoskeletal: osteoarthritis, occult fractures, meta-static deposits

OUTCOME AND FOLLOW-UP

The patient is now beginning cycles of chemoradiotherapy with plans for a possible future surgical resection.

DISCUSSION

Sessile polyps are classified using Kikuchi levels, which describe the submucosal invasion within a polyp. Kikuchi level sm1 is considered low-risk early rectal cancer with low metastatic potential.¹ Advanced polypectomy or endoscopic mucosal resections are the standard methods of treatment.^{2 3} Spread to liver, lungs and brain is

observed in high-risk rectal cancers.³ Several cases have documented spread to soft tissue structures of the head, neck and limbs; however, these cases cite previously treated or active high-risk rectal cancers.^{4 5} This case demonstrates a previously unreported example of meta-static spread to piriformis from a previously resected low-risk polyp. Integration of multiple disciplines while utilising a thorough and systematic approach to investigating a patient's symptoms is essential in establishing an unlikely diagnosis and future management strategy.

Learning points

- ▶ Pelvic/buttock pain in the context of altered bowel habits should be extensively investigated to include imaging and assessment of bowel, musculoskeletal structures and pelvic viscera.
- ▶ We encourage the reader to be vigilant to the possibility of metastases from rectal polyps to unlikely soft tissue structures and consider the relevant structures on the basis of presenting symptoms.
- ▶ We encourage the reader to adhere to a thorough and systematic approach to investigating patient's symptoms while utilising the multidisciplinary team.

Competing interests None.

Patient consent Obtained.

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Figure 3 T2-weighted axial pelvic MRI showing enlargement of the left piriformis mass.

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