CASE REPORT

Urothelial carcinoma presenting with distant metastasis to the rectum

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SUMMARY

Urothelial carcinomas (UC) arise from transitional cells in the urothelial tract. Advanced cases can spread locally to invade surrounding organs, or metastasise distantly to the lungs, bone or liver. We describe a case of an elderly woman with no previous cancer history, presenting with symptoms of an unusual distant metastasis.

BACKGROUND

This case identifies a rare presentation of urothelial carcinomas (UC), highlighting an unusual route for distant metastasis. A high index of suspicion should be held for patients presenting with urinary as well as rectal symptoms.

CASE PRESENTATION

An 84-year-old woman presented with rectal pain on defaecation, suprapubic pain worse on urination and 2 days of faecal and urinary incontinence. She had been nauseous for the preceding week, but had not had recent weight loss, bloating, loss of appetite, haematuria or bleeding per rectum.

Her medical history was significant for vagotomy, pyloroplasty and ovarian cystectomy in 1973, gastro-oesophageal reflux disease, irritable bowel syndrome and presbycusis. Her medications comprised of omeprazole, aspirin, simvastatin and tadalafil. She was usually fully independent and still driving.

Digital rectal examination revealed an irregular, tender mass anteriorly. Examination was otherwise normal. The patient was subsequently examined under anaesthesia, where uniform hard swelling of the whole circumference of the rectum was felt 6 cm from the anal verge.

INVESTIGATIONS

A pelvic MRI was requested to further delineate the area (figure 1). This confirmed circumferential

Figure 2 Flexible sigmoidoscopy showing normal rectal mucosa.

thickening of the wall of the lower rectum and anus, and revealed patchy T2 signal change within the left side of the rectal wall, with loss of clarity of the serosa, more suggestive of inflammatory change rather than malignancy. The MRI also showed diffuse thickening of the posterior and superior bladder wall.

A flexible sigmoidoscope, though unable to proceed past the proximal rectum due to faecal loading, revealed no obvious mucosal abnormality (figure 2). We proceeded to take four Trucut biopsies from the thickened rectal wall.

While awaiting biopsy results, we performed a CT of the abdomen/pelvis. In addition to the aforementioned MRI findings, this showed right hydronephrosis and hydroureter, with the renal pelvis measuring 17 mm (figure 3).

The rectal biopsies showed fragments of tissue infiltrated by tumour cells, characterised by cells with ovoid nuclei, small nucleoli and moderate amounts of eosinophilic cytoplasm. The samples

Figure 1 T2 MRI showing patchy signal intensity in the (A) rectum and (B) bladder.

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Figure 3 Contrast CT showing right-sided hydronephrosis.

were positive for CK 7, EMA, P40, GATA-3 and CA 125, with equivocal staining for BerEP4 (figure 4). Their appearances and immunohistochemical profile were consistent with a malignant tumour of epithelial origin, likely metastatic in nature with possible primaries in the bladder or ovaries.

A cystoscopy was performed, which showed large inflammatory-looking bullae in the bladder. Biopsies were taken, and the mass was resected to allow intubation of the right ureter. The tortuous upper ureter was straightened and a stent was placed to allow passage of urine. The bladder biopsies were infiltrated by a malignant epithelial neoplasm, with infiltration of the lamina propria, lymphatic tumour emboli and focal detrusor muscle invasion. These features were consistent with a high grade, invasive, papillary UC.

OUTCOME AND FOLLOW-UP

The patient's case was discussed at urology multidisciplinary team (MDT) meeting. Although in otherwise good medical health, the patient was elderly and frail, and thought not to be a good candidate for pelvic exenteration. The patient herself was not keen on radical therapy either, making 10 fractions of palliative radiotherapy a good option for limiting the effects of her disease.

A defunctioning colostomy was later formed due to ongoing rectal pain and incontinence, secondary to involvement of the anal sphincters. A month later, the patient was admitted with vomiting, with blood tests and imaging finding no correctable cause for her symptoms. Her nausea and vomiting were attribu-

ted to disease progression, and attempts were made to palliate her symptoms with a syringe driver.

DISCUSSION

UC can, rarely, metastasise to the rectum, usually in advanced or recurrent cases of the disease. We describe a case of a patient with previously undiagnosed UC, presenting to our general surgical unit with symptoms of rectal and suprapubic pain, and faecal and urinary incontinence. With only one similar report quoted in the literature,¹ this case highlights the importance of maintaining a high index of suspicion in patients with urinary as well as rectal symptoms.

As in other cases of bladder metastasis, the rectal mucosa was not involved, emphasising the importance of taking biopsies that involve the muscularis. Endoscopic ultrasound has been used to differentiate causes of rectal wall thickening,^{2,3} though biopsy is still required for confirmation. Once the diagnosis has been made, swift referral to a MDT will allow the best next course of action to be decided.

Learning points

- ▶ Urothelial carcinoma can, in rare cases, metastasise to the rectum.
- ▶ There is often involvement of the rectal muscularis, leaving the mucosa unaffected.
- ▶ Endoscopic ultrasound provides additional information for differentiating primary and secondary cancers of the rectum, but biopsies are required for a definitive diagnosis.

Contributors The case report was written by AE. The patient was under the care of CS.

Competing interests None declared.

Patient consent Obtained.

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REFERENCES

- 1 Ying-Yue J, Shen SH, Wang JH. Unusual presentation of urothelial carcinoma of the bladder with noncontiguous rectal and diffuse muscular skeletal metastases. *J Urol* 2010;184:1163–4.
- 2 Gleeson FC, Clain JE, Rajan E, *et al*. Secondary linitis plastica of the rectum: EUS features and tissue diagnosis (with video). *Gastrointest Endosc* 2008;68:591–6.
- 3 Yusuf TE, Levy MJ, Wiersema MJ. EUS features of recurrent transitional cell bladder cancer metastatic to the GI tract. *Gastrointest Endosc* 2005;61:314–16.

Figure 4 (A) H&E stain of rectal biopsy showing small clusters of malignant epithelial cells that express (B) cytokeratin 7 and (C) GATA-3.

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