

Lesson of the Week

Rectal mass of prostatic origin: a possible trap for general surgeons

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Prostatic carcinoma may rarely present with rectal symptoms and signs. Certain features of a rectal mass may alert the clinician to the possibility that it is prostatic carcinoma. Use of specialised histological techniques to examine rectal biopsy specimens can confirm the diagnosis so that inappropriate surgery is avoided.

Case report

An 82 year old man presented with a six month history of weight loss and constipation with the passage of ribbon like stools. He had frequency but no other urinary symptoms. Physical examination was unremarkable apart from showing a hard indurated mass per rectum. Examination under anaesthesia showed a large tumour with an irregular ulcerated surface extending from 3 cm to 10 cm from the anal verge; it was fixed anteriorly to the prostate and posteriorly to the sacrum. Biopsy showed it to be an adenocarcinoma, and a palliative abdominoperineal resection of the rectum was performed.

Postoperatively he failed to pass urine after removal of the catheter. Histological examination showed the mass to be a moderately differentiated prostatic adenocarcinoma, which had invaded the rectal mucosa. Stilboestrol 1 mg thrice daily was started, and he was readmitted after four months for a successful trial without a catheter. He remained well eight months postoperatively.

Discussion

Carcinoma of the prostate usually arises in the posterior lobe, but rectal invasion is rare. Previous cases have been reported by urologists.^{1,2} This low occurrence is probably due to the protective effect of Denonvilliers' fascia, which separates the prostate from the rectum. Lazarus classified prostatic invasion of the rectum into three clinical types³: (1) an anterior rectal mass; (2) an annular constricting lesion (both (1) and (2) may cause obstructive symptoms but leave the rectal mucosa intact); and (3) an anterior rectal ulcer, which may present with rectal bleeding, tenesmus, and diarrhoea, in which the rectal mucosa is breached. In all types the mass can occur anywhere from the anal verge to the rectosigmoid junction, depending on the direction of spread.

The clinical features that may alert clinicians to the possibility of cancer of prostatic origin are, firstly, the presence of urinary symptoms such as frequency, haematuria, and poor flow, although these may also be due to coexistent benign prostatic hypertrophy; and, secondly, the presence on examination of a rectal mass that is inseparable from the prostate or of an intact mucosa over either an anterior rectal mass or an annular constriction. Adequate biopsy specimens should be taken, and moderate to well differentiated

Immunohistochemical examination of rectal biopsy specimens may be necessary to differentiate adenocarcinomas of the prostate from those of the rectum

tumours may be diagnosed by microscopy. Poorly differentiated tumours may require immunohistochemical examination for prostatic specific antigen and prostatic acid phosphatase.⁴ The diagnosis may be supported by a raised serum acid phosphatase activity, the presence of bony metastases, and the finding of obstruction on intravenous urography.

Our case is unusual in that it was caused by an annular constricting lesion that had ulcerated through the rectal mucosa. Immunohistochemical examination of the biopsy specimen, however, would probably have shown the prostatic origin of the adenocarcinoma, and major surgery would then have been avoided in favour of hormonal manipulation and radiotherapy. The onus is on the clinician to inform the histopathologist that the prostate may be the origin of the tumour.

References

- 1 Goldfarb S, Leiter E. Invasion of the rectum by carcinoma of the prostate. *Arch Surg* 1980;115:1117-9.
- 2 Siegel AL, Tomaszewski JE, Wein AJ. Invasive carcinoma of prostate presenting as rectal carcinoma. *Urology* 1986;27:162-4.
- 3 Lazarus J. Complete rectal occlusion necessitating colostomy due to carcinoma of the prostate. *Am J Surg* 1935;30:502.
- 4 Nadjji M, Tabei SZ, Castro A. Prostatic specific antigen: an immunohistologic marker for prostatic neoplasms. *Cancer* 1981;48:1229-32.

(Accepted 15 July 1986)

Why should a patient with cirrhosis of the liver and oesophageal varices (in the quiescent phase) be advised to avoid tomato juice with or without Lea and Perrin's sauce?

A patient with well compensated cirrhosis and portal hypertension usually requires no special dietary restriction, though excessive salt intake could be unwise. If the patient has had ascites he may have been advised to keep to a low salt diet. Tomato juice contains on average 230 mg of sodium per 100 g juice.¹ This is considerably higher than some other common drinks. For example, the equivalent sodium content for pineapple juice is 1 mg, orange juice 4 mg, and Coca-Cola 8 mg. For this reason tomato juice should be avoided by patients on a low salt diet and possibly, given the pleasant low salt alternatives, taken only with caution in patients with no formal dietary restriction. A further concern is whether acidity of the patient's drink may lead to exacerbation of variceal bleeding. There is no convincing evidence that this is so, however. Moreover, the average pH of the tomato juices we tested was 4.2. This compares favourably with tonic water with a pH of 2.4, Coca-Cola pH 2.6, orange juice pH 3.1, and distilled water 4.0.—JAMES COX, senior registrar, and GRAHAM K BUCKTON, senior technician, Hull.

1 Paul AA, Southgate DAT. *The composition of foods*. London: HMSO, 1978.

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