Diagnostic Images

Bowel tumour

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A male aged 61 years had abdominal pain for 18 months diagnosed with endoscopy as being due to a duodenal ulcer and treated with ranitidine.

The pain was worse for the previous 7 days in the epigastrium, spreading to the whole abdomen with nausea and vomiting. There was abdominal distension and black stools for one week.

Figure 1 (a) Plain supine film of abdomen showing distended loop of bowel down to an area devoid of bowel loops suggesting a mass lesion.

Figure 1 (b) Enlarged view of distended bowel with valvulae conniventes running from margin to margin characteristic of small bowel when obstructed. With these appearances an erect film is superfluous.

Figure 2 Sonography of the right iliac fossa demonstrating a mass (arrows) with very bright central echoes – a 'target' lesion – indicating a bowel tumour and taken together with the plain film findings is diagnostic of a small bowel neoplasm.

Figure 3 Sonography of left lobe of liver showing a large metastasis with a low echogenic rim (arrows) and another metastasis but much more echogenic.

Comment

Small bowel obstruction is diagnosed largely by the clinical setting of colicky abdominal pain, nausea, vomiting and abdominal distension. Peristalsis may be visible and on auscultation there is a rush of high-pitched tinkles and splashes.

The plain supine film is usually diagnostic with distended loops of small bowel and absent gas and faeces beyond the site of obstruction while the erect film is equally non-contributory by showing no more than fluid levels. If fluid levels are the only radiological sign in the 'acute abdomen', beware – it can lead to unnecessary laparotomy. High small bowel obstruction not infrequently produces a featureless plain film, the so-called gasless obstruction due to small bowel filled with fluid and an empty colon.

Sonography is recommended as the next investigation where there is a suggestion of a mass lesion as in this case. Appendix abscess, peridiverticular disease and tumours can be diagnosed. Bowel tumours have the pathog-

Figure 4 Small highly echogenic metastasis in the right lobe of the liver (arrow).

nomonic appearance of a 'target' or 'bull's eye' lesion indicating a mass with bright central echoes due to the gas within the lumen.

At operation a 7 cm tumour causing almost complete obstruction was removed together with lymph nodes. The tumour was shown to be an adenocarcinoma.

Reference

FIELD, S., GUY, P.J., UPSDELL, S.M. & SCOURFIELD, A.E. (1985). The erect abdominal radiograph in the acute abdomen; should its routine use be abandoned? *British Medical Journal*, **290**, 1934.