Case 114 An insidious cause of lumbago

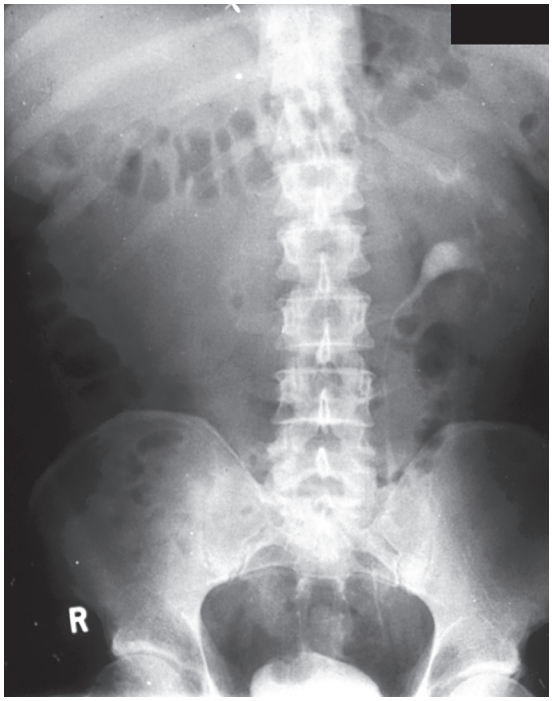

Figure 114.1

A house painter and decorator aged 62 years reported to his family doctor complaining of 'lumbago' for the past 4 or 5 weeks. When the doctor went carefully into the story, this was in fact a dull aching pain experienced in the right loin, which was getting worse, was present most of the time, disturbing his sleep, but was relieved somewhat with the proprietary analgesic tablets the patient was getting from his pharmacist. Apart from mild nocturia (ονχε α νιγητ), *which he had been experiencing now for about a year, he denied any urinary symptoms; in particular, he had not noticed any change in the colour of his urine.*

On examination, his GP found him to be a heavily built, overweight but otherwise healthy man. Nothing was found on abdominal examination but a dipstick test on his urine was positive for blood. He was therefore referred urgently to the local hospital, which had a special haematuria clinic.

At the clinic, the surgeon confirmed the above findings but there was deep tenderness, although no mass to feel, on deep bimanual palpation of the right flank. Rectal examination revealed a moderately enlarged, smooth-rubbery prostate. Microscopy of the urine, which was slightly turbid to the naked eye, showed numerous red blood corpuscles. An urgent intravenous urogram was ordered, and Fig. 114.1 shows the 15 min film of the series:

Describe the abnormal findings on this X-ray film (Fig. 114.1)

There is an irregular filling defect on the right side of the bladder, in the region of the right ureteric orifice. The right calyceal system and ureter are not visualized. The left kidney and ureter are normal.

What radiological diagnosis can be deduced from this investigation?

There is a tumour in the right side of the bladder that has obstructed the ureteric orifice. This has presumably resulted in hydronephrosis of the right kidney with gross functional impairment. The fact that the ureteric orifice is occluded is in favour of the tumour being malignant. Note that this is a good example of how a lesion in one part of the urinary tract may present with features in another part. Here, the bladder tumour presents with loin pain due to the resultant hydronephrosis.

What special investigation needs to be carried out in order to confirm the diagnosis?

Cystoscopy and transurethral biopsy. This was carried out under a general anaesthetic, which enabled a bimanual examination of the pelvis to be performed. A distinct mass was detected. Cystoscopy showed a sessile, superficially ulcerated mass overlying the right ureter. Biopsies were taken.

What would be the likely histological diagnosis of the tumour?

Transitional cell carcinoma is by far and away the commonest malignant tumour of the 'uroepithelium', which extends from the renal pelvis, along the ureter, the bladder and the urethra to just before the urethral orifice.

What factors predispose to the development of bladder cancer?

There is a raised incidence of bladder cancer in smokers. There is a high incidence of malignant change in the exposed mucosa of ectopia vesicae (see Case 112, p. 234) and in the bladder infected with schistosomiasis. Malignant change may also take place within a bladder diverticulum. Bladder tumours were once extremely common in aniline dye and rubber workers because of the excretion of carcinogens, such as β-naphthylamine, in the urine. Public health measures have eliminated this problem in the UK.

> *Examination of the tumour biopsy material revealed a poorly differentiated transitional cell carcinoma invading muscle. The patient was treated with platinum-based chemotherapy (cisplatin and gemcitabine) followed by radical cystectomy with formation of an ileal conduit, a loop of isolated ileum acting as a new bladder to which the ureters were anastomosed.*