Bladder Cancer in a Patient on Long-term Haemodialysis


Department of Urology, Yamagata University School of Medicine, Yamagata, Japan

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We report a case of bladder cancer on long-term haemodialysis. The relationship between bladder cancer and haemodialysis, and the necessity of periodic cytology of bladder washing are discussed.

Introduction

Since Matas et al. [1] first described cancers in uraemic patients, various neoplasms have been reported to occur in patients on haemodialysis [2, 3]. Recently, an increased incidence of cancer in haemodialysis patients has been emphasized [4]. However, the literature dealing with bladder cancer in haemodialysis patients is scanty [5]. We herein report a patient with bladder cancer receiving long-term haemodialysis.

Case report

A 60-year-old Japanese male, on maintenance haemodialysis for 11 years, was referred to our hospital with a 3-month history of bloody urine. Physical examination showed normal chest and abdomen. The prostate was also normal in size and consistency.

A haemogram revealed leukocyte count of 5000/m\(^3\) (normal, 4000–9000), haemoglobin 8.2 g/dl (14.0–18.0), erythrocytes 267 x 10\(^4\)/mm\(^3\) (430–520 x 10\(^4\)), haematocrit 25.2% (40–50) and platelet count 162,000 (130,000–340,000). Serum sodium was 141 mEq/ml (135–146), potassium 3.9 mEq/l (3.2–4.5), chloride 106 mEq/l (96–110), calcium 11.2 mg/dl (8.8–10.2) and phosphorus 6.3 mg/dl (2.9–4.7). Blood urea nitrogen was 52 mg/dl (9–25), serum creatinine 12.5 mg/dl (0.5–1.5) and uric acid 8.5 mg/dl (2.0–7.6). Liver function test and immunological examinations were all within the normal range.

Urinalysis could not be performed because of anuria. Cytology of bladder washings indicated malignancy. Cystoscopy revealed multiple papillary tumours arising from the left wall of the bladder. Pelvic computed tomography (CT) demonstrated a bladder tumour involving the left bladder wall, but no pelvic lymphadenopathy was found (Fig. 1).

The patient underwent transurethral resection of the bladder tumour. Pathological examination revealed a moderately differentiated transitional cell
Fig. 1. Computed tomography of pelvis shows tumour (arrow) in the left wall of the bladder

Fig. 2. A histological section of bladder tumour demonstrates moderately differentiated transitional cell carcinoma. H.E., ×180

carcinoma without muscular invasion (Fig. 2). Recurrence was confirmed cystoscopically 6 months later. The patient underwent radical cystectomy. Histopathological examination of the papillary tumours arising from the left wall of the bladder showed moderately differentiated transitional cell carcinoma. The tumour invaded the deep muscle layer of the bladder wall without reaching the adventitia. Six months after the operation, he is apparently tumour-free.