

CARCINOMA OF URINARY BLADDER ASSOCIATED WITH NEPHROTIC SYNDROME

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The association of nephrotic syndrome with solid tumors is well known. The most frequent renal lesion observed is membranous nephropathy with granular deposition of immune complex.¹ So far only one case of transitional cell carcinoma of urinary bladder presenting as nephrotic syndrome has been reported, the patient having had a minimal change disease with linear immunoglobulin deposits on immunofluorescence.² Our case had membranoproliferative glomerulonephritis with subendothelial deposition of immunoglobulin. Five weeks after removal of the tumor, proteinuria completely disappeared. The nephropathy was probably induced by antibody formation against a specific component of kidney substance.

Case Report

A 60-year-old male presented at our department with a history of generalized edema and oliguria. He had no history of pyoderma, fever, rash, arthritis or arthralgia sore throat. The patient had no past history of a similar illness, hypertension, drug intake, collagen vascular disease or diabetes mellitus. The physical examination revealed a male of average build with anasarca, a pulse of 85/min, blood pressure of 156/100 mm Hg, periorbital puffiness and pedal edema. Chest examination revealed signs of pleural effusion on the right side. Abdominal examination revealed ascites; CVS and CNS were apparently normal. Investigations revealed moderate normocytic anemia and normal LFT. Chest x-ray was consistent with right-sided pleural effusion. Pleural and ascitic fluid analysis revealed a transudative fluid. Urine examination showed proteinuria, hematuria and a few granular casts; 24-hour urinary protein was 3.0-3.5 g repeatedly. Blood urea was 30 mg%, and serum creatinine was 0.7 mg%. Serum electrolytes were Na 140 meq/dL, and K 4.9 meq/dL. Rheumatoid factor and ANA were negative, ASO was

showed normal-sized kidneys with normal collecting system, except that there was a localized thickening and irregularity of the anterior bladder wall. CT scan showed thickened bladder wall. Cystoscopy revealed a raised area of 1.5 cm on the anterior bladder wall and biopsy from this was consistent with transitional cell carcinoma (stage B) on histopathology.

Kidney biopsy was suggestive of membranoproliferative glomerulonephritis. Immunofluorescence of renal biopsy tissue showed deposition of IgM, but was negative for complement. A diagnosis of transitional cell carcinoma with nephrotic syndrome was made and oliguria was managed conservatively. The bladder mass was resected by transurethral endoscope, followed by local radiotherapy. The patient showed gradual decrease in proteinuria and it disappeared five weeks after resection of the bladder tumor. The patient is asymptomatic and doing well. Repeated cystoscopy did not reveal any raised area or suspicious lesion in the urinary bladder, and repeated follow-up urine examinations did not reveal any proteinuria or hematuria.

Discussion

The presence of linear immunoglobulin deposits on immunofluorescence and the disappearance of proteinuria (nephrotic syndrome) five weeks after resection of primary tumor shows a definite temporal relationship between the tumor and the immune-mediated renal lesion. The most common histological renal lesion encountered in patients with solid tumors is membranous glomerulonephritis, which has also been commonly observed with the tumors of colon.^{1,3} This has been shown to result from antibody formation against a component of the tumor cells leading to immune complex formation with their deposition in glomeruli;⁴ immunoglobulin from these glomeruli have been seen to react specifically with tumor cells.¹⁻⁸ Membranoproliferative glomerulonephritis is rare in association with solid tumors.¹ This histological renal lesion with bladder tumor is unusual and has not been reported previously. Although a rare entity, such cases need further immunological studies to show the exact antigen character, which will lead to pinpointing the exact disease pathogenesis.

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