

**Papillary Necrosis  
A Cause of Acute Renal  
Shutdown**

**Attaullah Shah,\* M.B.,B.S.,  
and  
H. Bilal,\*\* M.B.,B.S., M.S.,  
F.I.C.S.,  
Postgraduate Medical Institute,  
Lady Reading Hospital,  
Peshawar, Pakistan**

**Summary**

*A case of analgesic-induced papillary necrosis resulting in acute renal failure is described in a patient who presented with P.U.O. and who was a known (and treated) case of bladder carcinoma.*

**Case Report**

A middle aged doctor (I.D.) with a past history of growth bladder was admitted to Khyber Hospital, Peshawar with persistent P.U.O. and a recent bout of microscopic haematuria. In the course of his treatment, he went into acute renal failure and was demonstrated to have papillary necrosis. This patient had undergone TUR for a histologically proved Stage 1 Transitional cell carcinoma of the bladder which after multiple resections had cleared up completely. He had regular follow-up cystoscopies. The last cystoscopy was done in 1984 and was declared free of tumour. After that time, he did not turn up for follow-up till such time that he developed P.U.O. and was admitted to hospital. In hospital he developed acute renal failure. On physical examination he had some tenderness in the renal areas. Urine was loaded with pus cells and RBCs. TLC was elevated. Since he was a known case of growth bladder, his present condition was correlated with his previous disease.

It was thought that it might be the extension of the growth involving both ureteric orifices resulting into renal failure. Hence cystoscopy was advised. Cystoscopic examination revealed no growth, so ureteric catheters were passed in both kidneys but there was no urine at all. Dye was injected and retrograde pyelography performed.

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\* Registrar, Department of Urology, Lady Reading Hospital.

\*\* Professor & Head, Department of Urology, Postgraduate Medical Institute and Visiting Urologist, Lady Reading Hospital.

It revealed enlarged calices, loss of their normal cupping and a negative shadow in the right renal pelvis. These findings were suggestive of acute papillary necrosis. His clinical condition started deteriorating. His blood urea and serum creatinine started rising. So peritoneal dialysis was started and continued for three days. He had a dramatic response and his condition improved.

We went into the details of the history again and the patient disclosed that he had been taking two tablets of Ponstan three times a day for the last six years for headache and body pains. Hence it was concluded that it was a case of acute renal failure due to papillary necrosis. His previous disease (growth bladder) did not contribute to his illness.

### **Comments**

Papillary necrosis and growth bladder are two separate entities and have no relation to each other. Papillary necrosis is a rare cause of acute renal failure. In growth bladder when both ureteric orifices are involved, uraemia supervenes<sup>3</sup>. However, involvement of both ureteric orifices is uncommon. First the ipsilateral side and then progressively the other ureter is compressed. Acute renal failure then becomes apparent. The previous symptoms have direct relation to the disease<sup>1</sup>. There are many causes of renal failure and clues are obtained from the history. Cystoscopy and retrograde pyelograms are required when in doubt<sup>2</sup>. In our case there was no "doubt" regarding the cause of uraemia as he was a known case already. On cystoscopic examination and retrograde pyelography, growth bladder was excluded and the diagnosis of papillary necrosis was made. Prolonged use of analgesics is the most important cause as in our case.

Perhaps the most important differential diagnosis to be made, when acute renal failure occurs in a critically ill patient, is between vasomotor nephropathy and acute renal failure induced by drugs. Since the spectrum of drugs capable of causing renal failure continues to expand, it is of utmost importance that history of drug intake should never be ignored.

The aim of this paper is that one should go into the details of the history even in such a case when there is already a dominant disease. A small factor may unmask the underlying pathology. Dialysis is mandatory in reversible cases such as analgesic induced renal failure.

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