Redefining Needs for Better Follow-Up in Urinary Tuberculosis

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INTRODUCTION

Genitourinary tuberculosis (GUTB) is an uncommon form of tuberculosis, and its prevalence has shown a declining trend.(1) Tuberculous ureteral involvement is a serious problem with possible grave consequence if not detected and treated timely. Therefore, frequent intravenous urographies (IVU) are recommended both during the initial phase when anti-tuberculous treatment (ATT) is started(1) and even after the completion of therapy.(2)

There is paucity in recent literature about the real behavior of ureteral involvement with the advent of modern chemotherapy as many of these recommendations are based on past experiences. We describe a case of GUTB, where ureteral stricture and small capacity urinary bladder developed after 1-year of completion of treatment. This case re-emphasizes the need for long-term follow-up of these cases.

CASE REPORT

A 40-year-old man with hematuria, dysuria, and frequency was diagnosed as GUTB on the basis of microbiologic evidences. An IVU at that time revealed bilateral normal kidneys with a round bladder and mildly dilated right lower ureter (Figure 1). There was no evidence of an immunocompromised state, such as acquired immunodeficiency syndrome.

He was put on standard 9-month ATT, namely rifampicin, isoniazid, ethambutol, and pyrazinamide. Thereafter, the patient's symptoms, especially hematuria and dysuria, improved. An IVU done at completion of treatment revealed mild right-sided hydroureteronephrosis (Figure 2). Urine examination, including culture for pyuria and acid fast bacilli done at this time, were negative indi-

Figure 1. Initial intravenous urogram shows normal kidneys, right lower ureteral dilation, and a round bladder.

Figure 2. Intravenous urogram at completion of therapy shows mild right-sided hydroureteronephrosis with a round bladder and thick walls.

Figure 3. Intravenous urogram after 1-year of completed treatment shows right non-visualized kidney with small capacity irregularly scarred bladder.

Figure 4. Antegrade study (nephrostogram) revealed a long right lower ureteral stricture.

Figure 5. Intravenous urogram 1-year after augmentation cystoplasty and replacement of the lower ureter with ileum showing some degree of return of function of the right kidney.

Figure 6. Micturating cystourethrogram showing the augmented bladder with bilateral vesicoureteral reflux.

cating cure of infection. The options of either double J stent placement or close follow-up was discussed. However, at this stage, the patient was lost to follow-up and presented after 1 year with frequency of micturition.

Intravenous urogram now revealed right-sided non-visualized kidney with irregularly contracted bladder (Figure 3). Antegrade study revealed a long lower ureteral stricture (Figure 4) while radionuclide renal scan showed 20% differential renal function. Augmentation cystoplasty with ileal replacement of the lower ureter was done. Bladder biopsy showed fibrosis only. Tissue culture from the bladder wall for acid fast bacilli was not done at this time. At 2-year of follow-up, the patient is asymptomatic with stable disease (Figures 5 and 6).

DISCUSSION

The recommended follow-up protocol, regardless of the manifestation of GUTB, is evaluation at 3, 6, and 12 months after the course of chemotherapy.[2] During these visits, liver function tests, three early-morning urine specimens, and an IVU should be performed to ensure patency of the urinary

tract.[2] If disease progression or stricture formation is seen, endourological management at an early stage may be more effective and also prevent renal loss.[3,4]

Although such an intensive follow-up is recommended, there is a paucity of recent literature where deterioration has been documented on serial follow-up after completion of treatment. Furthermore, such an intensive follow-up is difficult, especially in underdeveloped countries. Therefore, emphasis on regular and prolonged follow-up is sometimes not explained to the patient.[4]

This case highlights the dilemma faced by urologists in the treatment of tuberculous ureteral infection both at the time of starting treatment and also after apparently adequate and successful treatment in resource-poor situations. Obviously, the post-inflammatory fibrosis continues to progress after completion of ATT; thus, underscoring the importance of prolonged follow-up even after successful treatment. Timely detection of ureteral involvement could have prevented renal deterioration; however, the patient may still need surgery for small contracted bladder. Another option, although not accepted as standard, could have been the use of steroids during the initial period.[5-7]

CONFLICT OF INTEREST

None declared.

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