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Case Report

EOSINOPHILIC URETERITIS: REPORT OF A RARE CASE

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Abstract:

During evaluation for left loin to groin pain, a 14- year-old boy was found to have left mid ureteric stricture with proximal hydro-ureteronephrosis on imaging. Pus cells were present in his urine with a raised serum creatinine level. There was peripheral eosinophilia and biopsy near the stricture revealed eosinophilic ureteritis. The patient was evaluated to find out the possible causes of eosinophilia. Here we report a case of eosinophilic ureteritis for its rarity.

Key words: Eosinophilic ureteritis, filariasis, ureteric stricture

Introduction:

Eosinophilic ureteritis is a rare disease.[1] No such case has yet been reported in Bangladesh. The disease usually presents with flank pain and ureteral obstruction. Etiology is unknown. Parasitic infestation, allergy, autoimmune diseases may be the etiological factors, specially filarasis in the endemic areas.

Case report:

A 14-year-old boy presented with a 15 days history of episodic left loin pain which radiated towards the groin. He did not complain of lower urinary tract symptoms. He had no history of tuberculosis, calcuria, chyluria, hypersensitivity to drugs or foods and did not come from the filarial endemic zone of Bangladesh.

On admission he was afebrile, healthy with a Body-weight of 40 kg. General examination revealed normal findings. There was mild tenderness in the left renal region. The white blood cell count was 9000/mm^3 with 30% eosinophils; 2-4/HPF pus cells were found in urine. Serum creatinine level was 2.1mg/dl. Ultra-sonogram revealed left sided ureteric calculus with proximal hydroureteronephrosis; right pelvicalyceal system, right ureter and urinary bladder were normal. As the patient's serum creatinine was raised intravenous urogram was avoided. Cystoscopy was normal. During ureteroscopy a short stricture was noted in the left mid ureter with sludge within the lumen. The ureteral mucosa just distal to the stricture was intact but erythematous. The sludge was removed, biopsy was taken from the erythemotous area and a D-J stent was placed in the left ureter. Biopsy revealed mural fibrosis, together with moderately dense infiltrates and focal dense collections of eosinophils indicating eosinophilic ureteritis. The patient was discharged on 1st post-operative day with advice to come with the reports of Complement C_3, C_4, IgG, IgE and ICT for filaria. Next plan was to find out the triggering factor, evaluation of renal function after 6 weeks, removal of D-J stent, location of stricture if persists by retrograde pyelogram or intravenous urogram and excision of the stricture with uretero-ureteral anastomosis over a D-J stent. After 4 weeks the patient came on follow up. His C_3, C_4, IgG, and ICT for filarial were normal but IgE was raised. We removed the D-J stent and advised Montelucast daily for 3 months and follow up at 3 months interval for 1 year.

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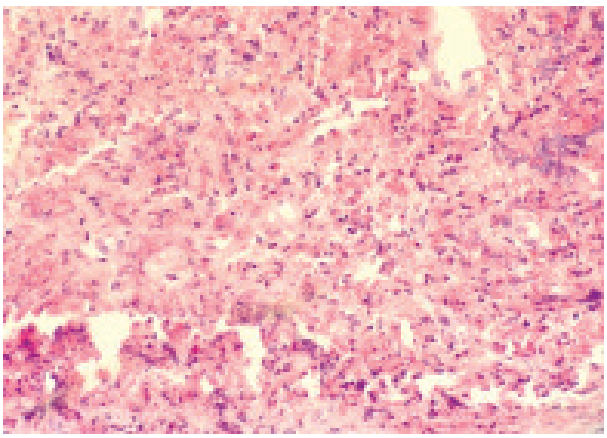

Fig.-1: *Eosinophilic ureteritis*

Discussion:

Eosinophilic ureteritis is a distinct clinicopathological entity known to cause ureteral obstruction and even massive reflux and retention[2] if involves the bladder. Using medical imaging, it is difficult to distinguish eosinophilic ureteritis from ureteral tumors[1]. Histopathological examination is the only way to diagnose the disease that has characteristics of eosinophilic infiltration and a granuloma reaction in the wall of the ureter[2,3]. To our knowledge, the present case is the first reported example of eosinophilic ureteritis in Bangladesh. The cause of the disease is unclear. But it may be associated with hypersentivity to bacteria, parasites, foods and drugs[4]. Parasites such as Schistosoma, Toxocara[5] and Sparganum[6] have been associated with eosinophilic infiltrates in the urinary bladder. In a case of filarial cystitis producing ureteric obstruction reported from one centre[7], prompt relief of obstruction was observed following treatment with diethylcarbamazine. Why the disease process should manifest in spite of treatment for microfilaremia is unknown, but it may be due to the toxins released when the microfilariae are destroyed, or because of the adult worms lodged in the lymphatic channels. Antigen–antibody complexes result in the release of lysozymes that cause tissue destruction[8] and activated eosinophils releasing cytotoxic cationic proteins capable of tissue damage have been demonstrated in eosinophilic cystitis[9]. Genitourinary injury has been proposed as a possible triggering etiology in the literature, and possible injuries considered include operations, stone passage, blunt flank trauma and radiation[2]. The patient had eosinophilia in the peripheral blood so we advised Complement C_3, C_4, IgG, IgE and ICT for filarial to find out the cause whether it is related to autoimmune disease, allergy or filariasis. On follow up his C_3, C_4, IgG, and ICT for filarial were normal but IgE was raised. He was advised Montelusat for 3 months and follow up at 3 months interval for 1 year.

Conclusion:

Eosinophilic ureteritis is a very rare entity and during evaluation causes of ureteral obstruction and stricture should be kept in mind. A histological examination is the gold standard for establishing the diagnosis. Early detection, evaluation of cause and prompt treatment are expected for better outcome.

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