



Eosinophilic Leukemoid Reaction with Eosinophilic Tumor Tissue Infiltration as an Extermely Poor Prognostic Factor in Urinary Bladder Cancer- a Known Entity Revisited

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Abstract

Eosinophilia can be a manifestation of a variety of causes such as infections, allergic reactions and autoimmune processes. Also, it is described in various solid malignancies in the presence of tumour eosinophilic infiltration. We report a patient of high-grade urinary bladder cancer with eosinophilic leukemoid reaction and tumour histopathology demonstrated diffuse infiltration of eosinophils. Though the entity is described to carry a good prognosis in literature, our experience is totally different as the patient deteriorated rapidly in a matter of days, was deemed inoperable in view of worsening performance status and was referred for palliative management.

Keywords Bladder cancer · Leukemoid reaction · Eosinophilia · Hematuria

Tumour-associated eosinophilia is an uncommon occurrence. Taken separately, Tumour-associated tissue eosinophilia (TATE) without Tumour-associated blood eosinophilia (TABE) is usually associated with a good prognosis, whereas, TABE has poor prognosis [1]. A 59-year-old gentleman underwent transurethral resection of bladder tumour (TURBT) (Fig. 1). The constant and worsening factor associated with his illness was elevated total leukocyte count (TLC) with predominant eosinophilia. Also, in his TURBT specimen, eosinophilic infiltration of the tumour was reported (Fig. 2). The bone marrow biopsy (Fig. 3a) and bone marrow aspirate (Fig. 3b) were unremarkable except for abundance of eosinophils. In view of poor performance status, he was

deemed poor risk for surgery and referred for palliative treatment. It was later found that the patient succumbed to his illness within two weeks and this case is being reported after obtaining the consent from his son.

Flamm studied 428 patients with primary superficial transitional cell carcinoma (TCC) of the bladder concluded that TATE was found to be associated with less recurrences and progression rate with higher cancer specific survival rate [2]. Lowe reviewed 1305 cases diagnosed as TCC and squamous cell carcinoma (SCC) of the bladder. He concluded that the finding of eosinophilia in bladder carcinoma is commoner in SCC and in tumours at a late stage of invasion. There is a better prognosis in pure TCC with tissue eosinophilia [3].

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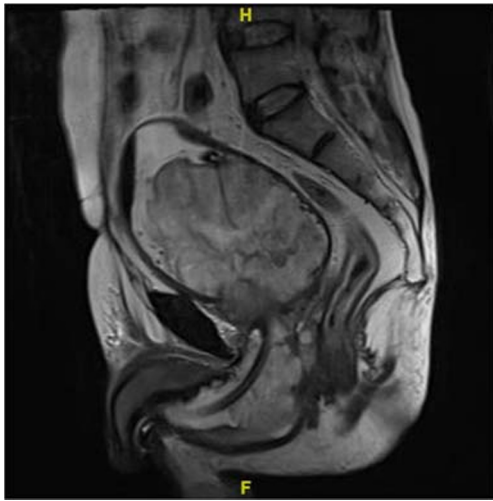


Fig. 1 MRI pelvis showing bladder and concomitant urethral growth

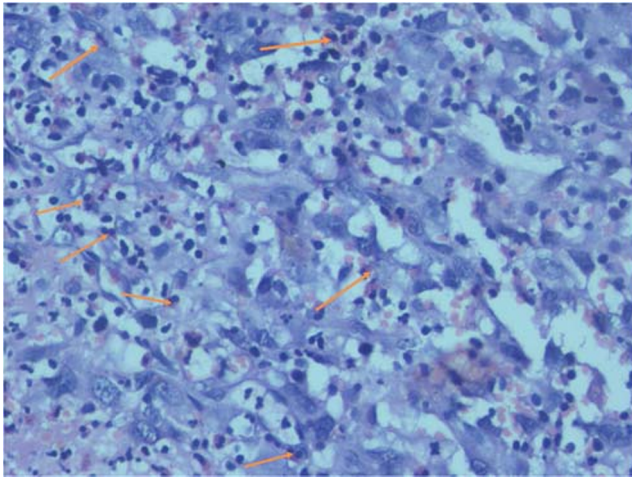


Fig. 2 Histopathology of TURBT specimen in low power Hematoxylin and eosin stain (H&E) with arrows indicating eosinophils in the background of transitional cell carcinoma

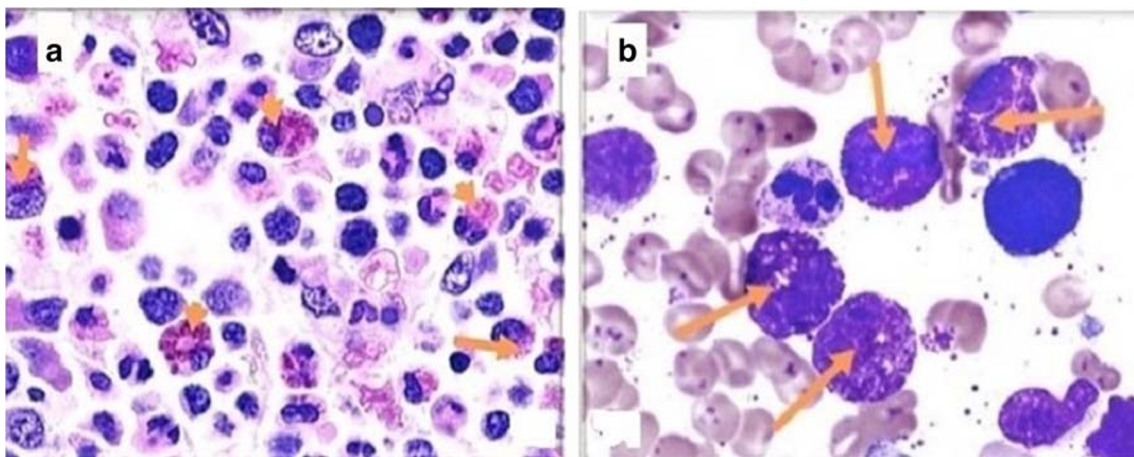


Fig. 3 **a** Bone marrow biopsy in high power H&E stain with arrows indicating eosinophilic precursors in abundance, **b** Bone marrow aspirate in high power H&E with arrows indicating eosinophilic precursors

Compliance with Ethical Standards

Conflict of Interest The authors declare that there are no conflicts of interest.

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