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Urinary Bladder Xanthoma – Is Immunohistochemistry Necessary?

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ABSTRACT

Urinary Bladder Xanthomas (UBX) are non-neoplastic reactive tumor like process. Isolated UBX is rare with only around 15 cases reported (Yu, Patel, & Bonert, 2015). UBX are reported in older patients who present with non specific symptoms like UTI or hematuria. Patients often have associated lipid anomalies. UBX have been vaguely described as yellowish white plaques or patches. Also, recent reports have stressed on the role of Immunohistochemistry in the diagnosis (Al-Daraji, Varghese, & Husain, 2007; Vimal, Masih, Manipadam, & Chacko, 2012). The objective of this report is to provide a cystoscopic view of the tumor which will enable easier identification and also to debate on the role of IHC in diagnosis.

Discussion

34 year old man presented with left flank pain. An ultrasound reported calculus at vesico-ureteric junction. Patient was planned for diagnostic scopy. Cystoscopy revealed characteristic yellowish polypoidal lesion with calcification (Fig. 1). Transurethral resection of the growth was done. Histopathology confirmed isolated UBX (Fig. 2). Repeat cystoscopy at 2 year period revealed no recurrence, again consistent with the benign, harmless nature of the lesion (Fig. 3).

The clinical behavior and benign nature of Xanthoma has been well documented in various reports.[1] The differential diagnoses for Xanthoma on Cystoscopy are Malakaoplakia, Xanthogranulomatous Cystitis, Granular cell tumor and Signet ring cell carcinoma.[2] Recently, there has been a lot of interest in the role of Immunohistochemistry (IHC) in the diagnosis of Xanthoma.[2,3] Immunochemistry is necessary only in doubtful cases. In developing countries, it is not available universally. It is costly and also delays the diagnosis. IHC in Xanthoma is carried out using anti-CD68 antibody. This marker is a general marker for Macrophages or histiocytes. This marker is not specific for Xanthoma alone, because IHC with CD-68 marker is positive not only in Xanthoma but also in Malakoplakia, Xanthogranuolomatous Cystitis and Granular cell tumor as all these conditions have aggregates of macrophages. IHC is thus useful only in ruling out Signet ring cell carcinoma which is negative for CD-68 staining.

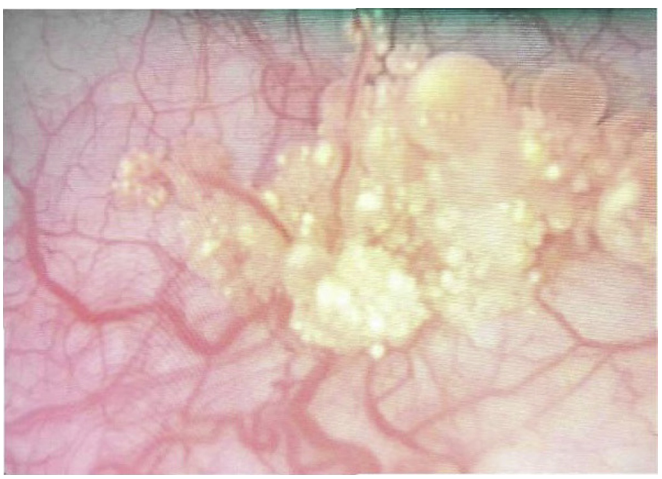

Figure 1. Pre-operative cystoscopic view of Isolated Urinary Bladder Xanthoma.

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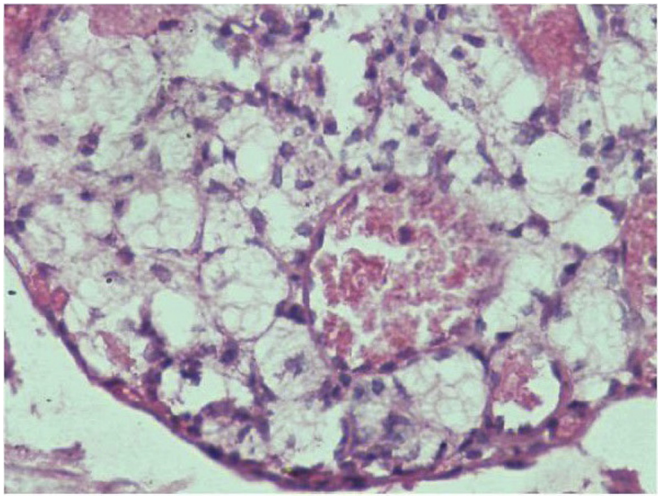

Figure 2. Histopathology shows polypoidal bladder mucosal folds exhibiting rich infiltrate of large foamy histiocytes without any other inflammatory cells and scattered blood vessels.

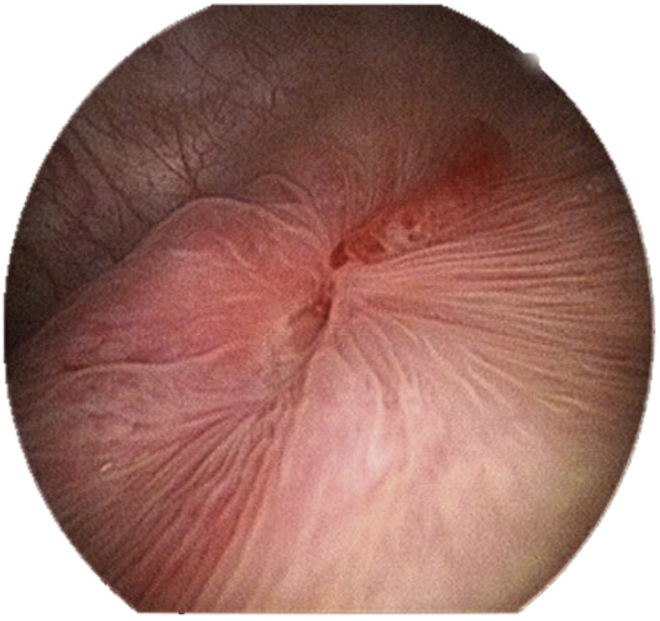

Figure 3. Post-operative cystoscopic view of Isolated Urinary Bladder Xanthoma at 2 years follow-up.

Next, we would like to discuss the histopathological findings in all the above conditions and highlight its accuracy in the diagnosis of Xanthoma. Malakoplakia also has foamy histiocytes but have the characteristic basophilic inclusions called the Michaelis-Gutmann bodies.[2] Xanthogranulomatous Cystitis is also similar on histopathology, but does not have MG bodies. They also have plasma cells, lymphocytes, Touton type giant cells and other inflammatory cell infiltration. Further, clinically they arise from the dome or anterior vesical wall and present as perivesical masses. Granular cell tumor is a benign tumor with capsule and has Eosinophilic cells with a distinct granular cytoplasm. Signet ring cell carcinoma has also got ovoid cells but have a peripheral crescentic hyperchromatic nucleus with infiltration into adjacent layers. Xanthoma is the only entity among all of the above which has uniformly foamy histiocytes without any other inflammatory cells.

Hence, we feel that with the characteristic yellow color lesion on cystoscopy with pathognomic features on histopathology and also given the obvious benign nature of Xanthoma, IHC can be safely omitted from the diagnostic work-up without any compromise in the diagnosis.

Conflicts of interest

None.

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