Commentary

Inflammatory pseudotumor of urinary bladder: Beware lest we forget

The inflammatory pseudotumor (IPT) has always been baffling clinicians with its clinic-radiological presentations; IPT masquerades malignancy so closely that it results in radical resection more often than not. IPT was first described by Brunn in 1939;[1] however the name "IPT" was coined by Umiker and Iverson[2] in 1954. As it has an inflammatory background and appears as a mass like lesion that is non-neoplastic,[3] the word "IPT" seems justified. Since the first description of two cases of IPT involving the lung by Brunn, it has been reported to involve almost every organ of the body.[4] Its pathogenesis is still obscure; a number of inflammatory and immunological factors have been implicated. Trauma, minor surgery, associated malignancy and infections, all have been postulated to be the inciting factors.[4] The characteristic pathological features of IPT include presence of acute and chronic inflammatory cells and myofibroblastic inflammatory cells. The vimentin positive myofibroblastic cells of IPT can be differentiated from those of malignant process by virtue of having minimal atypia and nuclear polymorphism and low mitotic activity. Immuno-histochemical studies of T and B cell populations helps in distinguishing IPT from lymphoma. Both T and B cells are present in IPT, while either clonal population of T or B cells predominates in Lymphoma. Moreover, the heterogenic nature of inflammatory cell population in IPT further differentiates it from lymphoma.[4]

Urinary tract involvement was first described in 1980 by Roth[5] who reported a case of urinary bladder IPT. It can occur at any age; however, it is rare in children and generally appears in young adults with a median age of 28 years. Painless gross hematuria is usually the presenting clinical manifestation and may result in anemia. Other symptoms include frequency of urination, dysuria and features of urinary tract obstruction. The radiologic features of IPT are variable and non-specific. Polypoidal enhancing intraluminal mass or sub-mucosal mass with or without perivesical fat involvement is usually the common imaging findings. IPT should be considered when an enhancing tumor is surrounded by a clot, particularly in young adults.[6] Cystourethroscopy clinches the diagnosis if there is a polypoidal, nodular or broad based mass, ulceration may also be seen; however, it may just completely miss a sub-mucosal mural IPT. Though IPT usually remains confined to lamina propria, infiltration of muscularis propria and perivesical tissue is not uncommon; adjacent organs may also be involved. Any part of the bladder can be involved by the IPT, though trigone is rarely involved. Management of IPT of bladder has been a contentious issue. If pre-operative diagnosis is established, complete local excision of the bladder mass, either transurethral resection or partial cystectomy as determined by the extent of the lesion, is a conventional acceptable treatment; however long-term follow-up with frequent cystoscopic examination of the patient is advisable. Medical management of the IPT, either using long-term antibiotics and/or anti-inflammatory drugs (steroidal or non-steroidal), is a worthwhile option and is being increasingly reported in the literature.[7,8] Spontaneous regression of IPT of bladder has also been described in the literature.[9] Possibility of uniform standard guidelines for the management of IPT seems remote in view of rarity of the lesion and its bizarre presentation.

To conclude, IPT poses a diagnostic challenge to clinicians radiologically and endoscopically; however, its accurate pre-operative identification may preclude unwarranted radical resections.

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