

Retroperitoneal inflammatory pseudotumor

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Dear Editor,

Inflammatory pseudotumor (IPT) is a rare clinical entity that mimics malignancy and its etiology is not fully explained. Trauma, surgery, malignancy, autoimmune diseases and infectious causes are accused (1-3). Histopathologically; it contains myofibroblastic spindle cells, acute and chronic inflammatory cells, and collagen (4-6). It is observed more frequently in childhood and adolescence period, but can also be seen in adults. It may occur in any part of the body but lung involvement is the most common clinic. There is an increase in reporting of IPT with abdominopelvic localization (7-9). Retroperitoneal involvement is rather rare. In this study, a patient who had retroperitoneal IPT diagnosis after surgical resection, is presented.

A 43-year-old male patient was referred to our clinic after observation of a well-defined solid mass of approximately 4 centimeters in the medial right renal artery by the ultrasound during renal evaluation follow-up because of prolonged diabetes. The patient received bronchodilator treatment for chronic obstructive pulmonary disease and oral antidiabetic because of type 2 diabetes mellitus for about 10 years. A patient with no history of previous surgery has been found to be an active smoker for 25 years. In physical examination, there was only prolonged expirium. Fasting blood glucose level was 158 mg / dl, HbA1c level was 6.4%, tumor markers and other laboratory parameters were in the normal range. In contrast-enhanced computed tomography (CT) and magnetic resonance imaging (MRI); there was a 53x32 mm solid lesion in the right renal hilus level which had a suspicion for right renal pelvic compression and invasion. T2-weighted MRI images showed hyperintense, T1-weighted images showed hypointense contrast enhancement and were compatible with mesenchymal tumor (Figure 1).

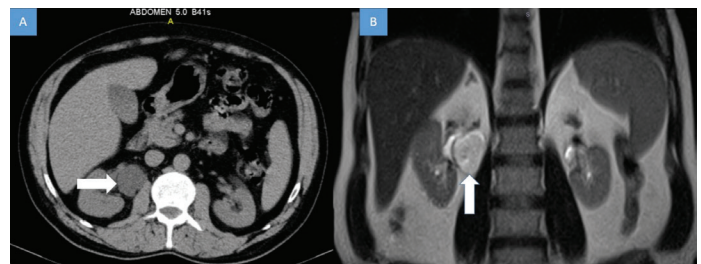


Figure 1. Computed tomography (A) and magnetic resonance imaging (B) appearance of the inflammatory pseudotumor adjacent to the right renal hilus

After multidisciplinary evaluation, about 5 cm of solid mass was totally excised by laparotomy in the posterior direction of the vena cava inferiora near the right renal hilus (Figure 2).

It was observed that the mass was not invasive to the surrounding tissues and easily dissected with its capsule. Paralytic ileus developed postoperatively was treated conservatively. Patient was discharged on postoperative 8th day without any problems. In pathological evaluation; mixed type inflammatory cells, spindle myofibroblastic cells with no atypia, and collagenous elements were observed. Vimentin and CD 68 were positive, Ki-67 index was 1-3% and was reported as compatible with IPT (Figure 3). No recurrence was found in the control CT at the 10th month of the follow-up in patient who was followed-up without any medical treatment.

IPT is a general definition and an umbrella term that includes inflammatory myofibroblastic tumor, pseudosarcomatous myofibroblastic proliferation of the genito-urinary tract, infective and proliferative processes of lymph node, spleen, and orbita (1,5,6). It is first described in lung, and considered to be an extremely inflammatory rather than

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a neoplastic process. In the study of Meis et al. in 1990s involving 38 cases with intraabdominal and retroperitoneal infection in children and adolescents, it has been understood that it may show neoplastic characteristics upon recurrence and metastasis in follow-up (4,6). The cause of IPT is unknown. Although it has been suggested that IPT is triggered by trauma, surgery, malignancy, autoimmune diseases and infectious causes; there is no consensus on this issue. Approximately 50% of IPTs have a cytogenetic clonal abnormality over expressing anaplastic lymphoma kinase, a receptor tyrosine kinase, suggesting a neoplastic cause (1-3,10,11). Histopathologically; it contains myofibroblastic spindle cells, acute and chronic inflammatory cells, and collagen. Mitotic activity is usually low and atypical mitosis is rare (5, 6).

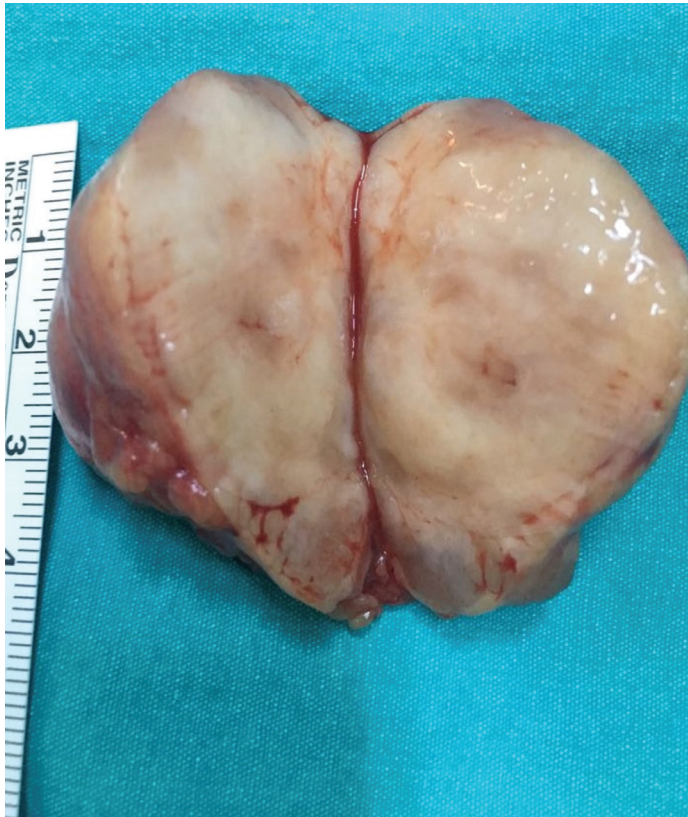


Figure 2. Macroscopic appearance of the resected mass

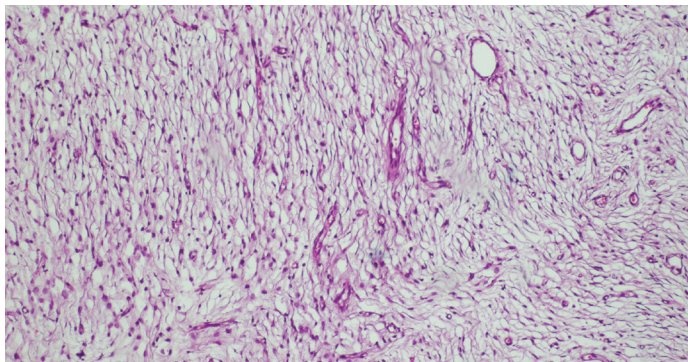


Figure 3. Histopathologic examination (H&E staining) identifies myofibroblastic spindle cells associated with mixed inflammatory cells, which are predominantly plasma cells (x10 magnification)

It is more frequent in childhood and young age group but it can be observed in all age groups. As with other solid tumors, it may be asymptomatic and may develop symptoms according to its localization due to growth of the mass. Depending on the inflammatory disease, fever, loss of appetite, weakness and weight loss are seen in 15-30%.

Hypochromic microcytic anemia, increased erythrocyte sedimentation rate, thrombocytosis, hypergammaglobulinemia, and increased levels of IL-6 were detected (1,2,5). The radiological appearance of IPT is nonspecific because it may be localized to many different organs and systems, may interfere with other pathologies. As retroperitoneal IPT is rarely seen, it frequently mimics malignancy and can be confused with sarcoma, lymphoma, and retroperitoneal fibrosis. In CT, heterogeneous and mixed attenuated soft tissue masses are observed. On MRI; T2-weighted images show mild or marked signal intensity relative to muscle tissue. T1-weighted images are seen as isodense or mild hyperdense and mass with significant borders (1-3). Completely surgical resection is recommended because of the growth pattern, local recurrence and metastasis potential especially in inflammatory myofibroblastic tumor (4,5,9). Surgery, the most effective treatment method, is recommended for definitive diagnosis and elimination of local pressure-related symptoms that can occur because of mimicking the neoplasm and aggressive behaviors such as recurrence-metastasis (2,6).

Retroperitoneal IPT is rare and can mimic other malignant conditions in imaging modalities. Complete surgical resection; remains the most applicable method for providing differential diagnosis and treatment.

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