

Gastric inflammatory myofibroblastic tumour in an adult – a rare manifestation

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Abstract

Inflammatory myofibroblastic tumor (IMFT) is usually a benign disease that is often mistaken for a malignant condition. We present a case of inflammatory pseudotumor from the greater curvature of the stomach of an adult presenting as an exophytic mass lesion. It was diagnosed as gastrointestinal stromal tumor or mesenteric lipomatous tumor radiologically but it was found to be otherwise on histopathological examination.

Keywords: Inflammatory myofibroblastic tumor, gastrointestinal stromal tumour.

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Received Date: 22/12/2014 Revised Date: 30/12/2014 Accepted Date: 06/01/2015

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DOI: 10 January 2015

INTRODUCTION

An inflammatory myofibroblastic tumour may occur anywhere in the body, but more commonly in the lung and orbit in children and young adults. Extrapulmonary sites like head and neck, abdominal cavity, extremities and skin are also reported. IMFT is otherwise known as inflammatory pseudotumor, myofibro histocytic proliferation and plasma cell granuloma. The etiology and pathogenesis of this entity is not clear, but widely believed to be of reactive origin or due to infection.

CASE REPORT

A 34 years old male visited our outpatient clinic with complaints of early satiety for 6 months and abdominal pain for 15 days. He had unintentional gradual loss of weight, however, there was no history of hematemesis or

malena. He has not undergone any surgery in the past. All routine blood investigations were normal except for hemoglobin which was slightly below the normal range. A firm palpable mass lesion identified in left hypochondrium with mild tenderness and rest of the clinical examination was unremarkable. Upper gastrointestinal endoscopy revealed extraneous indentation of the stomach wall. Computer tomography (CT) abdomen (Figure: 1) showed a large lobulated, exophytic mass in the left hypochondriac region abutting the greater curvature of the stomach, measuring 15.1 X 12.3 X 11.4 cm with focal areas of hypo densities and negative attenuation suggestive of gastrointestinal stromal tumor (GIST) or mesenteric lipomatous tumor. There was no radiological evidence of focal invasion, regional lymphadenopathy or focal liver lesions. The tumor was excised by wedge resection of the stomach along the greater curvature (Figure: 2). On gross examination, excised specimen showed a well circumscribed capsulated tumor, measuring 21 X 16 X 14 cm arising from the serosal surface of the stomach with multiple nodules of variable consistency. Microscopic examination showed increased number of fibroblasts with ropey collagen and scattered vascular spaces and a few lymphocytes and plasma cells were in the background (Figure: 3). A Fibrocollagenous area with mitosis is also noted (Figure: 4). Tumor cells showed CD 34 positivity and focal S 100 positivity (Figure: 5and6). These

histopathological findings were in favor of inflammatory myofibroblastic tumor of gastric origin. The patient was followed up in our outpatient clinic for a period of one

year and he is observed free from all his symptoms. A contrast enhanced CT scan was advised at the end of first postoperative year, revealed no evidence of recurrence.

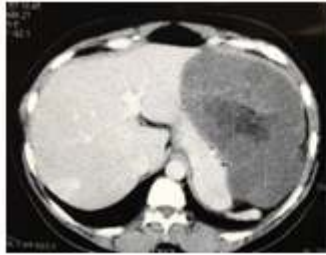


Figure 1: CT of the abdomen shows a large lobulated mass



Figure 2: Gross photographs showing a well circumscribed capsulated tumor arising from the serosal surface of stomach.

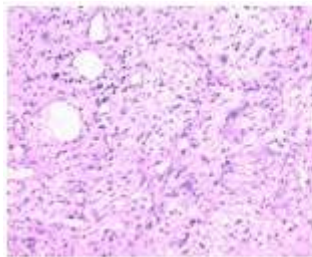


Figure 3: Microphotographs of hematoxylin and eosin-stained sections showing increased number of fibroblasts with ropey collagen and scattered vascular spaces and a few lymphocytes and plasma cells in the background.

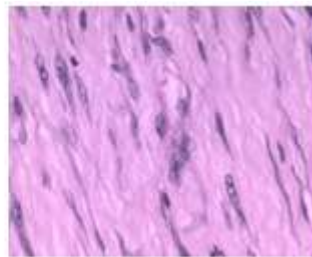


Figure 4: Microphotographs of hematoxylin and eosin-stained sections showing fibrocollagenous area with a mitosis.

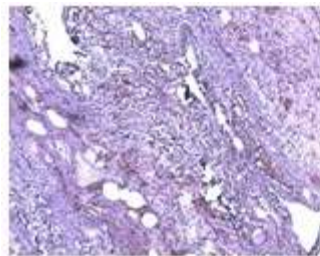


Figure 5: Microphotographs of immunohistochemical stain showing CD 34 positivity

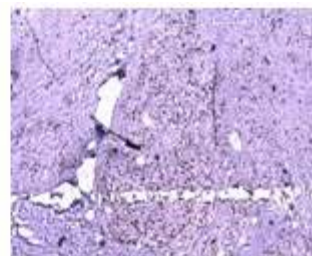


Figure 6: Microphotographs of immunohistochemical stain showing S 100 focal positivity

DISCUSSION

Inflammatory myofibroblastic tumor is a very unusual, inflammatory soft tissue mass often said to be quasineoplastic lesion. It is predominantly comprised of spindle cells and variable degree of inflammatory cells^{1,2}. It was first described in the liver by Pack and Baker in 1953³. Several etiopathogeneses have been proposed for this disease. Most commonly accepted pathogenesis of IMFT are post-inflammatory changes, secondary to infection, post traumatic, post surgical, autoimmune mechanisms⁴⁻⁶. Alternatively, due to its focal invasion and recurrences some consider IMFT as a possible primary tumor with a background of inflammatory cells⁷⁻⁹. IMFT have been reported to occur commonly in children and

young adults¹⁰, but its occurrence in adults particularly in stomach is extremely uncommon^{1,2}. Lung is the most common site of involvement followed by abdominal cavity¹¹. It may also occur in head and neck, trunk, extremities, pelvis and skin¹². Differential diagnosis to be considered for IMFT are gastrointestinal stromal tumor, inflammatory fibroid polyp, smooth muscle neoplasm, peripheral nerve sheath tumor, fibromatosis and follicular dendritic cell sarcoma¹³. It may be difficult to clinch the histopathological diagnosis of IMFT by tissue samples obtained by image guided biopsies and perioperative biopsies. Along with this the absence of any specific immunohistochemical staining for IMFTs makes the complete analysis difficult, unless the whole specimen is

sent to the pathologist¹⁴. Treatment of choice is complete surgical resection of the lesion. Incomplete excision may lead to local recurrence within one year¹⁵.

CONCLUSION

Gastric IMFT is a rare, generally a benign inflammatory soft tissue tumor that may mimic malignant mass lesion clinically and radiologically. Though it is common in children and young adults, very few cases in adults are also reported in literature. Due to its rarity and non specific imaging characteristics pre operative diagnosis is almost always not feasible. Histopathological examination is the most valuable tool for arriving at the final diagnosis and there by altering the course of management of the patient. Generally there is a minimal risk for local recurrence with a good prognosis in IMFT after complete resection. It may worth remembering this condition for its deceptive clinical and imaging appearances as a malignant lesion. Histopathological study with immunohistochemical stain certainly is the most valuable tool for clinicians in guiding the appropriate management to the patient.

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Source of Support: None Declared
Conflict of Interest: None Declared