

Leiomyomas Of The Spleen

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Citation

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Abstract

Benign smooth muscle tumors commonly arise in the gastrointestinal system, genitourinary system and skin. Splenic localization is very rare. Very few cases of multifocal splenic leiomyoma have been reported in literature. A case of splenic leiomyomas occurring in an eighteen year old immunocompetant girl with a coexisting cicatrizing duodenal ulcer is presented.

INTRODUCTION

Benign smooth muscle tumors are a rare occurrence in the spleen. Splenic leiomyomas have been described in association with immunosuppression, ataxia telangiectasia and Epstein-Barr virus.^[1,2] Involvement of multiple organs in these cases has been mentioned in the literature. We present a case of leiomyomas occurring in the spleen, in an immunocompetant individual.

CASE HISTORY

An eighteen year old girl presented with pain abdomen, vomiting and loss of weight of eighteen months duration. She had received antitubercular treatment for pulmonary tuberculosis at the age of one year. Hematological and biochemical investigations were within normal limits. The patient was retroviral negative. Upper gastrointestinal endoscopy showed a duodenal ulcer with cicatrization. A gastric biopsy revealed H. Pylori induced chronic antral predominant gastritis. On computed tomography, multiple well defined lesions in spleen were seen. Splenectomy was performed on clinical suspicion of splenic tuberculous abscesses or splenic lymphoma. Gastrojejunostomy with truncal vagotomy was also done for gastric outlet obstruction secondary to duodenal ulcer.

On gross examination, the enlarged spleen measured 13x9.5x4cms and weighed 376 grams. External surface showed grey white nodular areas. On cut section, multiple well circumscribed grey white fleshy nodules largest measuring 4x3.5cms, with focal whorled areas were identified [Figure 1].

Figure 1

Figure 1: Spleen showing multiple well circumscribed grey white fleshy nodules with focal whorled areas.



Microscopy showed encapsulated tumor composed of intersecting fascicles of uniform spindle cells with elongated blunt ended nuclei, mild anisonucleosis, surrounded by focally hyalinised stroma [Figure 2, 3]. Adjacent spleen showed markedly congested red pulp and thickened trabeculae. No mitosis or necrosis was noted. Pathologic diagnosis was leiomyomas of spleen. Masson trichrome stain and immunohistochemical study proved the smooth muscle origin of tumor. Tumor cells showed strong positivity with smooth muscle actin(SMA) [Figure 4]. CD117 negativity ruled out gastrointestinal stromal tumor[Figure 5]. The patient is well after ten months of follow up.

Figure 2

Figure 2: Encapsulated smooth muscle tumor with adjacent splenic parenchyma (H&E,x40).

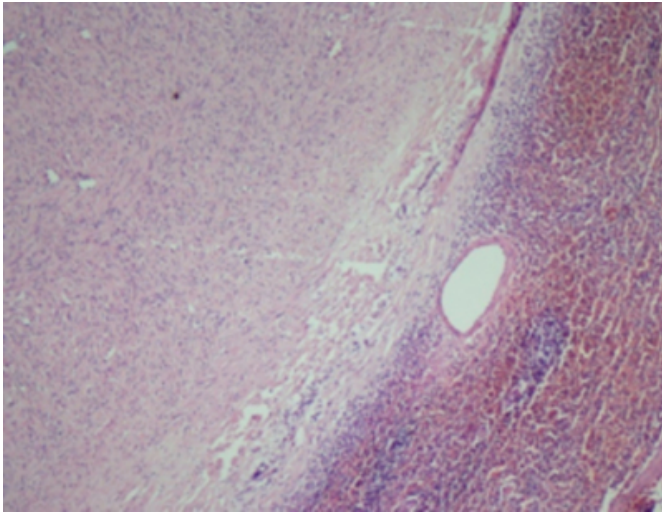


Figure 3

Figure 3: Fascicles of spindle cells intersecting at right angles, having blunt ended nuclei (H&E,x100)

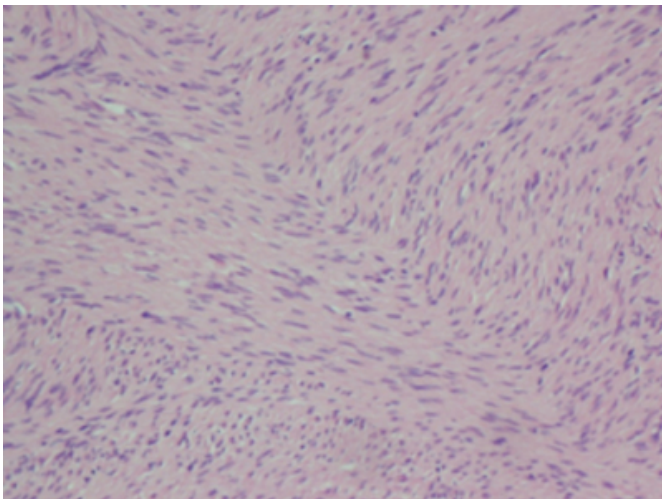


Figure 4

Figure 4: Tumor cells showing smooth muscle actin positivity. (x400)

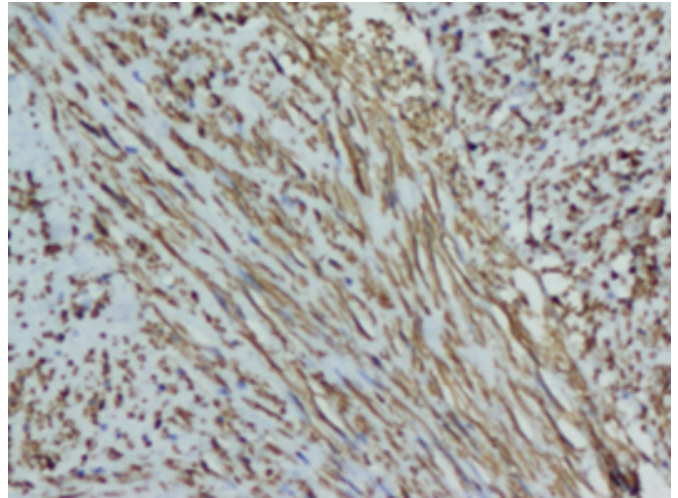
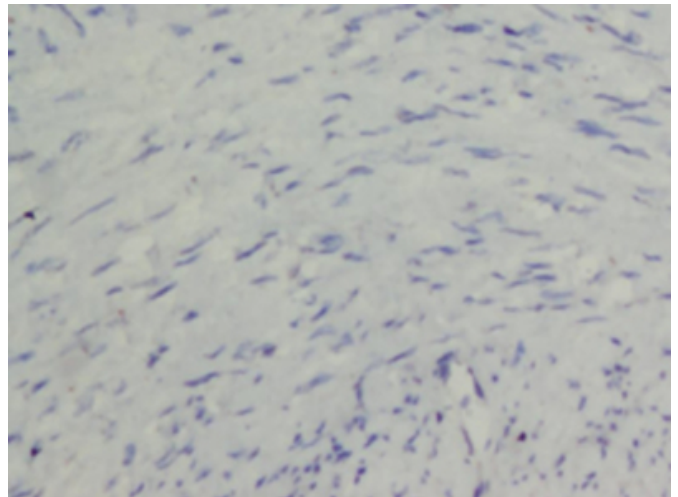


Figure 5

Figure 5: CD117 negative tumor cells (x400)



DISCUSSION

Benign smooth muscle tumors commonly arise in the gastrointestinal system, genitourinary system and rarely skin.^[3] Splenic localization is rare. In a study on splenic solid tumors, the most common benign lesion was inflammatory pseudotumor.^[4] Splenic leiomyoma has been documented in immunosuppressed states like AIDS, organ transplant or chemotherapy. Strong association with Epstein-Barr virus has been noted.^[2, 5, 6, 7] An altered immune surveillance or an increased likelihood of contracting viral infections has been suggested to explain the increased prevalence of soft tissue tumors in immunodeficiency. Multifocality and multiple organ involvement have been noted.^[8]

In our case, the patient was immunocompetent. Splenic leiomyoma in an immunocompetant state is rarely reported in the literature. After extensive literature search, our case appears to be the tenth case report of splenic leiomyoma. The origin of the tumor is unclear. Leiomyomas often develop in areas of the organs that normally contain smooth muscle cells such as the capsule and blood vessel walls. According to literature, it could be derived from smooth-muscle cells of the wall of intrasplenic arteries or veins. Tumor origin from nonmuscular mesenchymatous cells with secondary leiomyomatous differentiation is another possibility.

In conclusion, splenic localization of leiomyomas is very rare. Though occurrence in immunosuppressed states is reported in the literature, our case documents it in an immunocompetant patient. Splenic leiomyomas should be considered in the differential diagnosis of multiple well defined lesions of spleen.

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