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RESEARCH ARTICLE

LAPAROSCOPIC SPLENECTOMY FOR ISOLATED SARCOIDOSIS OF SPLEEN

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ABSTRACT

Sarcoidosis is an inflammatory disease with an unknown etiology. The main manifestation of sarcoidosis is due to involvement of the pulmonary system, in which it presents as a noncaseating granulomas and generalized lymphadenopathy. It is generally a multisystem disease that presents with a wide spectrum of differential diagnosis including infectious,autoimmune,neoplastic conditions of spleen. However, isolated granulomatous disease confined to spleen is rare. The approach to isolated splenic nodules in a patient with nonspecific abdominal symptoms should be focused on exclusion of malignancies and infections, and may require computed tomography, magnetic resonance imaging, and positron emission tomography–computed tomography imaging; scintigraphy; bone marrow biopsy; breast and genital examinations; and endoscopies. We report a rare case of isolated sarcoidosis of spleen which was treated laparoscopically.

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INTRODUCTION

We report a case of 35 yr old male patient presented to OPD with complaint of pain in the left hypochondrium for 3 months which was exaggerated on walking. Patient had no history of fever, weight loss, loss of appetite. Ultra sonogram of abdomen was done that revealed multiple splenic lesions making impression of lymphangioma spleen. Patient was further evaluated and CECT abdomen was done that revealed multiple hypo dense lesions (Fig;1,2) .Further more PET CT of the patient was done that showed gross lymophadenipathy (Fig. 3,4) and pathological investigations showed non caseating type of granuloma with significant increase in the levels of serum angiotensin-converting enzyme (ACE) enzymes and diagnosis of sarcoidosis was reached at.

DISCUSSION

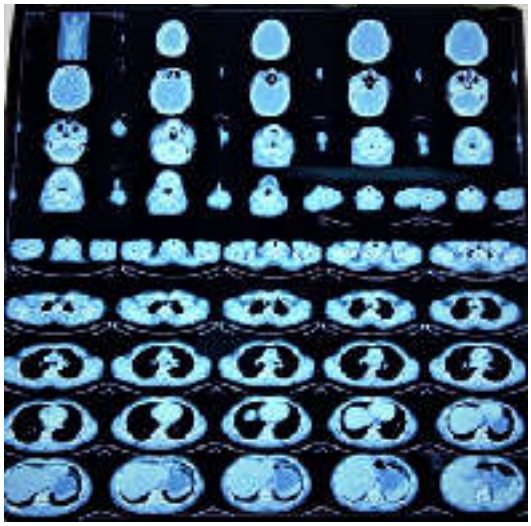
Sarcoidosis is a chronic inflammatory disease characterized by the presence of noncaseating granulomas. Its diagnosis is based primarily on clinical and radiological findings (Fig: 1, 2, 3, 4) associated with the histology of epithelioid granulomas; although granulomas are not a specific finding of sarcoidosis, and other diseases should be excluded. These include infections caused by bacteria or fungi, carcinomas, and environmental agents. Splenic sarcoidosis in the absence of clinical or radiographic pulmonary disease is extremely rare and usually does not cause symptoms. Abdominal pain and systemic symptoms such as fever, malaise, and weight loss occur in some patients. Laboratory tests are not usually helpful. Radiological findings of isolated splenic lesions are nonspecific, and the differential work-up includes lymphoma, metastasis, hemangioma, Hematoma, abscess, hamartoma, and angiosarcoma. However for definitive diagnosis histopathology is needed. The incidence of splenomegaly associated with sarcoidosis is variable, and may be as high as 40%. Various imaging methods may play a role in the diagnosis and treatment strategy in patients with sarcoidosis. Computed tomography (Fig; 1, 2), abdominal ultrasonography, MRI, and PET-CT can easily detect splenic lesions. PET-CT seems to be a very useful imaging method in the evaluation of disease activity and identification of

undetected areas, lymphadenopathy (Fig; 3, 4) as well as in monitoring response to treatment in patients with sarcoidosis. Abdominal disease without the evidence of pulmonary abnormalities on chest radiography in sarcoidosis can be found in approximately 25 to 38 percent of cases. (1) Asymptomatic patients do not require the use of immunosuppressive drugs. Only when symptoms occur, steroids or even methotrexate and azathioprine can be used. As many as 66% of patients spontaneously remit. The lack of response or the appearance of complications may impose splenectomy.Isolated extra pulmonary manifestation of sarcoidosis occurs in 10 percent of these patients.(2) Laparoscopic splenectomy has been used extensively as a tool for diagnosis and treatment for the diseases of the spleen (Fig; 5, 6, 7) and definition of malignancy. Thus, laparoscopic splenectomy was indicated for diagnostic purposes. It is a minimally invasive approach that provides shorter hospitalization, better aesthetics, decreased blood loss, and decreased postoperative complications and should replace open splenectomy as a technique of choice for hematological disorders.(3,4) The benefit of rapid recovery allows the early start of chemotherapy. Splenectomy does not alter the course of disease but may be needed for treatment of complications, and indications include symptoms, hypersplenism, prophylaxis for splenic rupture, and neoplastic exclusion. Laparoscopic splenectomy has gradually become the gold standard for surgical removal of the spleen (Fig; 5, 6, 7).

This case report highlights the diagnostic approach of splenic lesions and the value of laparoscopic splenectomy as an effective and safe procedure for diagnosis and treatment (6). Our case was of an extremely rare form of sarcoidosis. The isolated splenic disease is a precursor for systemic disease. Therefore, patients in this setting should be closely followed by their physicians for relapse, and immunosuppressive therapy is indicated when there is involvement of major organs (neurological, ophthalmological, or cardiac) or evidence of organ dysfunction or progressive disease in other organs. The final diagnosis may be achieved only by histology.

Pre –Operative Imaging

Fig. 1.2. CECT. Abdomen showing multiple hypo echoic nodules in the spleen



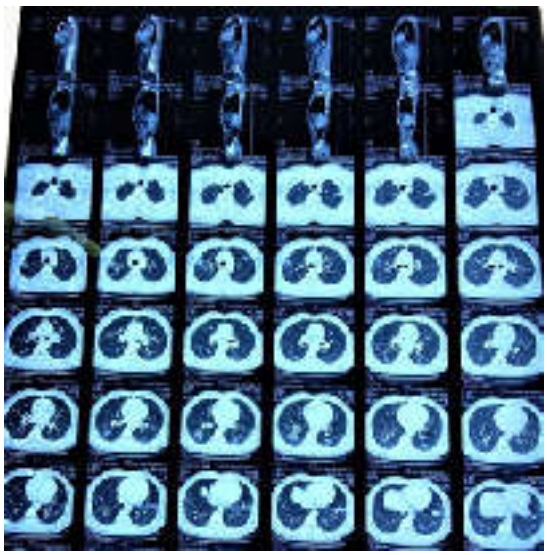


Fig 3. 4. PET-CT showing gross lymphadenopathy

Fig 5. Diagnostic Laparoscopy showing spleen with suspicious nodules

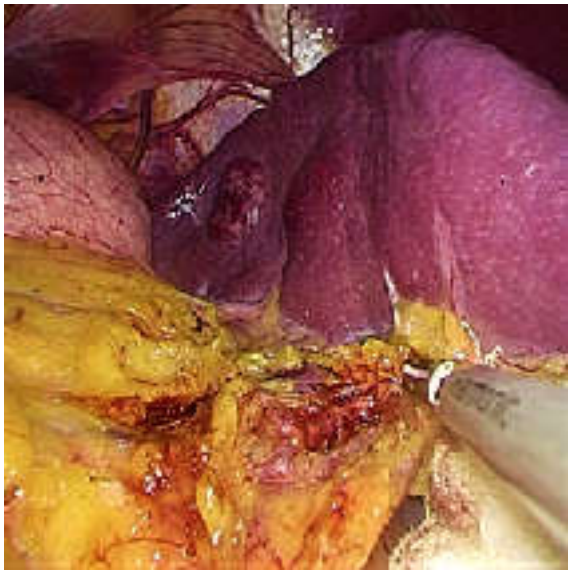


Fig. 6. Mobilization of splenic pedicle

Fig. 7. Spleen specimen after complete mobilsation

Fig. 8. Post Op Picture after Laparoscopic Splenectomy

CONCLUSION

Isolated splenic sarcoidosis is a rare manifestation of extra pulmonary disease. The final diagnosis may be achieved only by histology, requiring biopsy or splenectomy. Minimally invasive surgery is now regarded as Gold standard treatment. It is safe and most efficient method for diseases of the spleen and should be the first option when feasible.

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