An unusual cause of ascites and pleural effusion in an elderly woman: Sarcoidosis presenting with parailiac lymph node involvement

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Dear Editor,

We present the case of a 70-year-old woman who referred to our department with a 2-month history of fatigue and lower abdominal pain. The pain was vague, non-radiating, and unrelated to eating. There was no history of fever, night sweats, or weight loss. Past medical history was significant for osteoporosis. She had an abdominal hysterectomy and bilateral oophorectomy 15 years ago. On physical exam, vital signs were within normal limits. Breath sounds were absent in left lung base. Her abdomen was tender without rebound tenderness. Though common blood count was normal, erythrocyte sedimentation rate was 62 mm/h. Liver function tests and renal function tests were normal range, except alkaline phosphatase level (ALP) at 225 U/L (normal, ≤120 U/L). Total protein and albumin were 8.1 g/dL and 3.8 g/dL, respectively. Left-sided pleural effusion was detected on chest X-ray. The patient underwent computed tomography (CT) scanning of the thorax and abdomen. CT analysis of the thorax revealed an enlarged paraaortic lymph node and left-sided pleural effusion (Figure 1a). Contrast-enhanced abdominal CT showed multiple paraaortic and parailiac lymph nodes and ascites (Figure 1b). Calcifications were observed in the left-sided large lymphadenopathy (Figure 1c). Diagnostic thoracentesis revealed an exudative fluid. Ascitic fluid contained a 5,520 cells/μL white blood cell count with a predominance of lymphomononuclear cells. Ascitic fluid examination showed albumin concentration at 3.1 g/dL, total protein at 6.4 g/dL, glucose at 103 mg/dL, and lactate dehydrogenase (LDH) at 158 U/L. Adenosine deaminase level of peritoneal fluid was 31.1 U/L (normal ≤ 30 U/L), and acid-fast stain and mycobacterium tuberculosis polymerase chain reaction (PCR) were negative in ascitic samples. Quantiferon Gold was also negative. Cytopathologic examination of the peritoneal fluid was negative for malignant cells. Hence, the patient underwent excisional lymph node biopsy. Histopathology revealed non-caseating granulomas (Figure 2a) involving giant cells and Schaumann bodies (Figure 2b). Thus, a final diagnosis of sarcoidosis leading to ascites and pleural effusion was made. The patient was managed with oral metilprednisolone 0.8 mg/kg daily. Fatigue and pain resolved after the initiation of the therapy, and ascites disappeared on ultrasonographic examination. The response was good at 6-month follow up.

Sarcoidosis is a multisystem inflammatory disorder characterized by granuloma formation. The clinical course of sarcoidosis ranges from an indolent disease to a progressive disease with organ failure. Though the most typical presentations are the involvement of lungs and intrathoracic lymph nodes, sarcoidosis has the potential to involve almost any organ system (1). Thus, it may present with diverse clinical manifestations. Extrapulmonary involvement of sarcoidosis occurs in over 30% of cases. The abdomen is one of most common extrapulmonary sites with skin, eyes, heart, and central nervous system. Liver, spleen, lymph nodes, and kidney are frequently involved abdominal sites, but most of them are asymptomatic (2). Symptomatic gastrointestinal tract involvement is extremely rare (3). Intraabdominal lymph node involvement is seen in up to 30% of the patients, mainly located in periportal, paracaval, paraaortic, and celiac sites (2). Parailiac lymph node involvement is also extremely rare. Ascites is one of the rare manifestations of sarcoidosis, and it may appear as a result of portal hypertension related to liver involvement or severe pulmonary involvement with a SAAG higher than 1.1 g/dL and peritoneal involvement with a SAAG lower than 1.1 g/dL. Pleural effusion is also seen in less than 3% of

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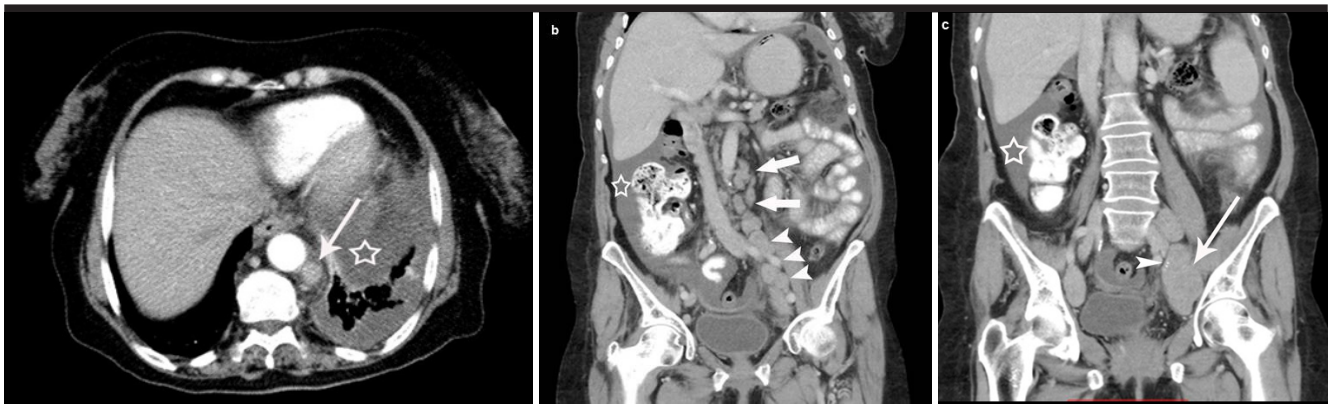

Figure 1. a-c. Thoracal computerized tomography (CT) scan revealed left sided pleural effusion with paraaortic lymph node (a); additional abdominal CT revealed ascites, paraaortic lymph nodes (arrow) and parailiac conglemerated lymph nodes (arrowhead) (b); Calcifications (arrow head) were observed in the left sided large lymph adenopathy(arrow) (c).

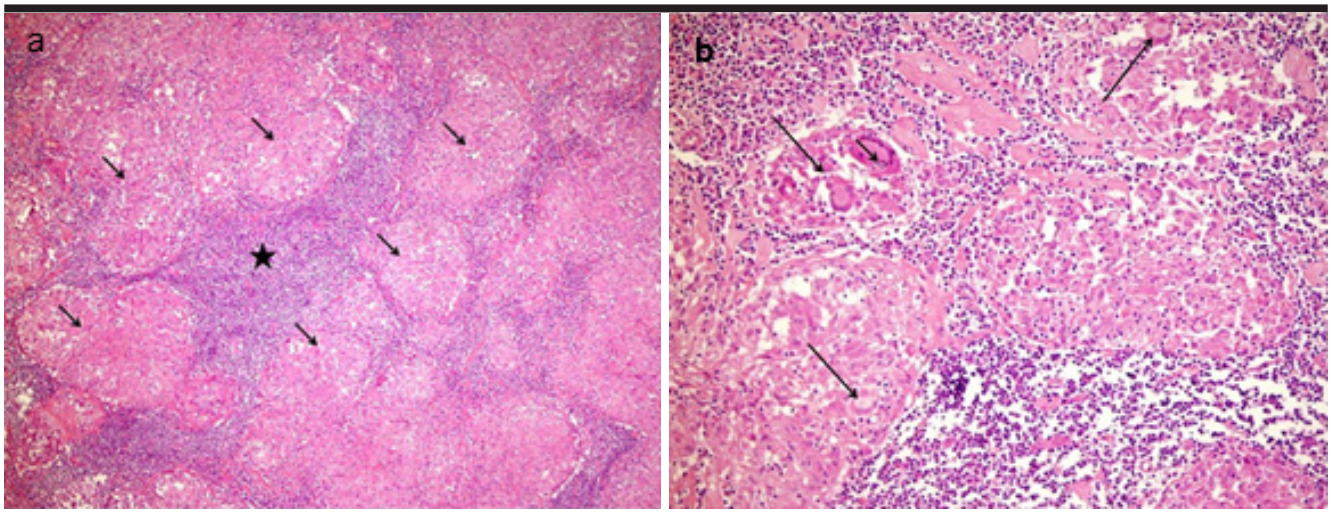

Figure 2. a, b. Histopathological assessment of lymph node revealed non-ceseating granulomas (arrow) (H&E, x 100) (a); giant cells (long arrows) and Schaumann body (short arrow) (H&E, x200) (b).

cases with sarcoidosis. Very few cases present with pleural effusion and ascites, concurrently (4).

As the patient had lymphadenopathies in both sides of the diaphragm and pleuroperitoneal fluid accumulation, several malignant diseases, including lymphoma, metastatic carcinoma, and other non-malignant infectious and rheumatologic diseases, were considered in the differential diagnosis. Thus, the patient was diagnosed with excisional lymph node biopsy. Though most of the patients with sarcoidosis have pulmonary involvement, approximately 8% of sarcoidosis cases present with only extrapulmonary involvement without pulmonary involvement (5). This case highlighted that sarcoidosis may manifest with various unexpected clinical scenarios, and extrapulmonary presentations may be a challenge to the differential diagnosis.

MAIN POINTS

- *Sarcoidosis is a multi-systemic disorder which can involve almost any organ, but most commonly affects the lungs and mediastinal lymph nodes.*
- *The systemic nature of the sarcoidosis can lead to diverse manifestations without lung or mediastinal disease.*
- *Ascites and pleural effusion are rare manifestations of sarcoidosis.*
- *The diagnosis of sarcoidosis requires pathologic confirmation of non-caseating granuloma in affected tissues.*

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