

Case report

## Unexpected diagnosis in a patient with a liver mass: A case report

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### Abstract

Sarcoidosis is a rare inflammatory disease. It is characterized by granulomatous formation. The liver is the second most common site of involvement after the lung. Sarcoidosis of the liver is usually asymptomatic. Symptomatic cases can present with jaundice, itching, elevated liver enzymes, and the development of portal hypertension in rare situations. We, at this moment, submit a case of liver sarcoidosis in a patient with liver cirrhosis that presented with upper gastrointestinal bleeding. Upper digestive endoscopy revealed gastric varices. Ultrasonography of the abdomen revealed a suspicious liver mass for hepatocellular carcinoma. There is no nay cause of gastric varix in this patient apart from hepatic sarcoidosis (portal hypertension).

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Treatment of the patient with corticosteroids leads to the complete disappearance of the liver mass. Despite the high incidence of HCC in Egypt due to the high prevalence of HCV infection, it is crucial to search for the rare causes of hepatic masses.

**Keywords:** liver mass; sarcoidosis, gastric varix

## Introduction

Sarcoidosis is a chronic, multisystem disorder of unknown cause characterized in affected organs by an accumulation of T lymphocytes and mononuclear phagocytes, noncaseating epithelioid granulomas, and conditions of the healthy tissue architecture(1).

All body parts can be involved, but the organ most frequently affected is the lung. In addition, involvement of the skin, eye, liver, and lymph nodes is common.

Sarcoidosis is occasionally discovered in asymptomatic individuals, but more commonly, it presents abruptly over 1 to 2 weeks, or the affected individual develops symptoms over several months.

Acute or subacute sarcoidosis develops abruptly over a few weeks and represents 20 to 40% of all cases.

These individuals usually have constitutional symptoms such as fever, fatigue, malaise, anorexia, or weight loss. These symptoms are generally mild, but in 25% of the acute cases, the constitutional complaints are extensive(2).

Two syndromes have been identified in the acute group. First, Löfgren's syndrome is frequent in Scandinavian, Irish, and Puerto Rican females include the complex of erythema nodosum and x-ray findings of symptoms, including arthritis at the ankles and knees wrists, or wrists elbows (3).

Second, Lymphadenopathy is widespread in sarcoidosis. Intrathoracic nodes are enlarged in 75 to 90% of all patients; usually, this involves the hilar nodes, but the paratracheal nodes are commonly affected. Less frequently, there is an enlargement of subcarinal, anterior mediastinal, or posterior mediastinal nodes. In addition, peripheral lymphadenopathy is widespread, particularly involving the cervical, axillary, epitrochlear, and inguinal nodes(3).

Sarcoidosis involves the skin in 25% of patients. The most common lesions are erythema nodosum (4).

Although liver biopsy reveals liver involvement in 60 to 90% of patients, liver dysfunction is usually not clinically significant. Sarcoidosis generally involves the periportal areas. In addition, isolated granulomatous hepatitis can occur. Approximately 20 to 30% have hepatomegaly and

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biochemical evidence of liver involvement. Usually, these changes reflect a cholestatic pattern and include an elevated alkaline phosphatase level; the bilirubin and aminotransferase levels are only mildly elevated, and jaundice is rare. Rarely, portal hypertension can develop, as can intrahepatic cholestasis with cirrhosis(8).

Parotid enlargement is a classic feature of sarcoidosis. Bilateral involvement is the rule. The gland is usually non-tender, firm, and smooth. Xerostomia can occur; other exocrine glands are rarely affected(5).

The major problem in treating sarcoidosis is deciding when to treat it. Because the disease clears spontaneously in 50% of patients, and permanent organ disorders often do not improve with glucocorticoid treatment, clinicians have controversy regarding the criteria for treatment (2).

Methotrexate, 5 to 15 mg/week in a single oral dose, is often used when contraindicated glucocorticoids (6).

### **Presenting Concerns**

A 48-year-old man, employee, mild smoker, married, and have three children. The youngest is 11 years old. The patient presented with the first attack of upper GI bleeding in the form of hematemesis and melena. He had diabetes. Also, he had a total thyroidectomy three years ago and is on replacement therapy in the form of levothyroxine 150 ug per day.

### **Clinical Findings**

Two weeks before admission, he had mild epigastric pain related to meals, dyspepsia, and altered bowel habit. He infrequently uses NSAIDs for back pain. There are no symptoms suggestive of other systems of affection. The patient was fully conscious; blood Pressure was 150 /80 mmHg, pulse 90 /min steady, average temperature. The patient was obese (BMI 45.2kg/m<sup>2</sup> )with Mild bilateral lower limbs pitting edema. There was no jaundice or pallor. The liver was enlarged, firm, and tender. The spleen was enlarged, not tender. There are no ascites. Chest and heart examination were unremarkable

Table (1): clinical and laboratory, and radiological findings of the patient

At admission	
White blood cell	7600
Platelet	328

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Total Bilirubin	0.8 mg/dl
Direct Bilirubin	0.2 mg/dl
Albumin	3.6 gm/dl
ALT/ AST	35/46
ALP	617
HBsAg	-ve
HBCore Ab	-ve
HCVAb	-ve
Urea	44
Creatinine	0.7
TSH	14.8
HbA1C	6.1
ESR	>100
LDH	419
AFP	3.1
CXR	Normal
ECG	Normal

Upper GI endoscopy revealed fundal varix injected with three ampoules of amcrylate and lipiodol. C-T abdomen showed numerous pre and para-aortic lymph nodes. The largest one

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measures 2.5× 4.7 cm. The liver is moderately enlarged with prominent left and caudate lobes and wavy contours.

Computed tomography revealed a well-defined exophytic isodense focal lesion (2\*2 cm) in the right lobe displayed mild contrast enhancement in the arterial phase with rapid washout in the venous phase. In addition, the spleen is mildly enlarged.



Fig (1) Endoscopic view shows fundal varix.

### Diagnostic procedure:

Ultrasound-guided biopsy of the liver masses revealed a non-caseating granuloma with giant epithelial cells characteristic of sarcoidosis.

### Therapeutic Focus and Assessment

The patient received treatment in the form of prednisolone 60 mg orally per day for one month, and after that, the patient gradually withdrew the corticosteroids. After 3 months, the hepatic mass completely disappears, and the fundal varix is obliterated.

### Follow up (after three months):

Abdominal computed tomography: the liver is moderately enlarged with prominent left and caudate lobes and wavy contour. The spleen is mildly enlarged.

Upper GI endoscopy revealed the site of previously injected fundal varix.



Fig (2) Endoscopic view shows the site of the injected fundal varix.

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Table (2): clinical and laboratory and radiological findings of the patient (follow-up)

	At admission	After four months	After eight months
Hemoglobin	11.1gm/dl	12.3	12.2
White blood cells	7600	8900	8100
Platelet	328	213	225
Total Bilirubin	0.8 mg/dl	0.5	0.7
Direct Bilirubin	0.2 mg/dl	0.1	0.3
Albumin	3.6 gm/dl	3.9	3.7
ALT	<b>35</b>	39	27
AST	<b>46</b>	36	30
ALP	<b>617</b>	160	122
ESR	<b>&gt;100</b>	44	
LDH	<b>419</b>	330	
ACE	<b>109/85</b>	74/85	
TSH	<b>14.8</b>	9.21	5.01
HbA1C	<b>6.1</b>	<b>10.2</b>	<b>6.3</b>

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**Case report****Discussion**

The cells surrounding granulomas can produce increased amounts of ACE, and the blood level of ACE may increase in sarcoidosis. ACE elevated in 50% to 80% of those with active sarcoidosis. The blood level of ACE tends to rise and fall with disease activity. The ACE test can monitor the course of the disease and the effectiveness of corticosteroid treatment (7).

ACE moderately increased in various conditions and disorders, such as HIV, Histoplasmosis (fungal respiratory infection), Diabetes mellitus, Hyperthyroidism, Lymphoma, Alcoholic cirrhosis, Gaucher disease, Tuberculosis, Leprosy(7).

Although sarcoidosis is not a common cause of liver cirrhosis and portal hypertension(8), in our case, it may be the cause of the patient liver cirrhosis and gastric varices. The patient did not have viral hepatitis, HCV, or HBV infection. Also, the patient did not give any history of metabolic liver disease. Therefore, the treatment of hepatic sarcoidosis is debatable(2). Moreover, liver cirrhosis and vascular decompensation in our patient are additional questionable risk factors for the patient's treatment as corticosteroids are the main line of treatment. Despite that, we treat our patient with corticosteroids for three months with a good response (the disappearance of the hepatic masses and stabilization of the patient's clinical condition). Therefore, it is difficult to conclude that sarcoidosis is the only cause of liver cirrhosis and vascular decompensation. Still, the excellent response of the patient's condition to corticosteroids may assume that hepatic sarcoidosis is the principal cause of the patient chronic liver disease.

**Conclusion:**

Hepatic sarcoidosis can lead to portal hypertension, upper gastrointestinal bleeding, and liver masses. Also, treatment of hepatic sarcoidosis can lead to complete remission and the disappearance of liver masses.

**Informed Consent**

The patient provided his informed consent for the publication of this case report.

**Conflicts of interest**

The author declares no conflicts of interest.

**Footnotes**

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**CARE Checklist (2013) statement:** The author has read the CARE Checklist (2013), and the manuscript was prepared and revised according to the CARE Checklist (2013).

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## References

1. WALSH FB. Ocular importance of sarcoid: Its relation to uveoparotid fever. Archives of Ophthalmology. 1939;21(3):421-38.
2. Blich M, Edoute Y. Clinical manifestations of sarcoid liver disease. Journal of gastroenterology and hepatology. 2004;19(7):732-7.
3. Kobak S, Sever F, Usluer O, Goksel T, Orman M. The clinical characteristics of sarcoid arthropathy based on a prospective cohort study. Therapeutic advances in musculoskeletal disease. 2016;8(6):220-4. Epub 2017/03/04.
4. Mana J, Marcoval J. Skin manifestations of sarcoidosis. Presse medicale (Paris, France : 1983). 2012;41(6 Pt 2):e355-74. Epub 2012/05/15.
5. Gadodia A, Bhalla AS, Sharma R, Thakar A, Parshad R. Bilateral parotid swelling: a radiological review. Dento maxillo facial radiology. 2011;40(7):403-14. Epub 2011/10/01.
6. Vorselaars AD, van Moorsel CH, Deneer VH, Grutters JC. Current therapy in sarcoidosis, the role of existing drugs, and future medicine. Inflammation & allergy drug targets. 2013;12(6):369-77. Epub 2013/10/25.
7. Lieberman J. Elevation of serum angiotensin-converting-enzyme (ACE) level in sarcoidosis. The American journal of medicine. 1975;59(3):365-72. Epub 1975/09/01.
8. Bakker G, Haan Y, de Buy Wenniger LM, Beuers U. Sarcoidosis of the liver: to treat or not to treat? Neth J Med. 2012;70(8):349-56.