

A Rare Cause of Hypercalcemia: Asymptomatic Isolated Hepatic Sarcoidosis

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ABSTRACT

A sixty-five-year-old female patient applied to our clinic with complaint of asthenia existing for one year. Hypercalcemia, elevation of cholestatic enzymes and angiotensin-converting enzyme level were detected in the laboratory values. The histopathological examination in the liver biopsy was reported as consistent with granulomatous reaction not involving caseous necrosis, sarcoidosis' involvement of liver. Any findings of pulmonary involvement were not discovered in the bronchoscopic examination and biopsy. Steroid treatment was started with the diagnosis of isolated hepatic sarcoidosis. We deemed it worthy of presenting as it is a rare case.

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Introduction

Hypercalcemia is a common electrolyte abnormality. Hypercalcemia occurs due to mostly primary hyperparathyroidism in outpatients and in hospitalized patients due to mostly malignancy.¹ The primary causes of hypercalcemia, among others, include intoxication of vitamin A and D, familial hypocalciuric hypercalcemia, lithium, thiazide diuretics, hyperthyroidism and granulomatous disease. Sarcoidosis is a granulomatous disease which causes hypercalcemia. It usually causes hypercalcemia at mildly asymptomatic level. The most common organ involvements in sarcoidosis are lung, spleen and liver in order.² While lung and liver involvements frequently co-exist in cases in the literature; isolated hepatic involvement is seen rarely. On the other hand, isolated hepatic is usually diagnosed with portal hypertension and its complications.³ A case of hepatic involvement in sarcoidosis which is rarely seen in the hypercalcemia etiology is discussed in this case presentation.

Case presentation

A sixty-five-year-old female patient applied to our clinic with complaint of asthenia existing for a year. No significant characteristic was detected in the patient and family history. In her physical examination, her vital signs were stable, there were no abnormal signs in her systemic examination. In the laboratory findings, improved levels of 11.6 mg/dL calcium, 3.5 mg/dL phosphor, 7.1 pg/mL parathormone (PTH), 5.56 ng/mL 25-OH Vitamin D, 504 U/L alkaline phosphatase, 206 U/L gamma glutamyl transferase and Ca 442.26 mg/day in the twenty-four-hour urine were found to be abnormal. No pathology was detected in the abdominal ultrasonography (USG), endoscopy, colonoscopy, mammography and breast USG carried out for malignancy scan, since PTH level was suppressed. No pathology was detected in the aspiration and biopsy of the bone marrow carried out for multiple myeloma. Examinations were planned for the differential diagnosis of

granulomatous disease. Tuberculin skin test was anergic. Angiotensin converting enzyme (ACE) level was found high with 142 U/L (normal interval is 8-52 U/L). In the high resolution computed tomography, pleuroparenchymal thin fibrotic bands in the left lung basal, calcified nodule with 10 and 6 mm diameter were imaged respectively in right lung lower lobe mediobasal and lower lobe laterobasal. Bronchoalveolar lavage (BAL) and biopsy were planned along with bronchoscopy. Its CD4/CD8 rate of 1.8 and adenosine deaminase level of 1.9 U/L were detected in BAL. No atypical and malign cells were observed in cytology. There was no reproduction in the tuberculosis and fungal culture. Lung parenchymal biopsy was carried out; no granulomatous reaction was detected. There was no toxic drug and herbal usage in the medical history of the patient who had elevation of cholestatic enzyme. Serologic markers for viral and autoimmune hepatitis were negative in the examination of etiology. In the liver biopsy, histopathologic examination was reported to be consistent with liver involvement in sarcoidosis as granulomatous reaction which does not include caseous necrosis. The patient was diagnosed with hepatic sarcoidosis with asymptomatic isolated liver involvement based on the current findings, by eliminating other granulomatous diseases. Steroid treatment was started. The patient was discharged with recommendation of polyclinic control when hypercalcemia was seen to be fixed during follow-up examinations.

Discussion

Sarcoidosis is a multisystem disease with unknown etiology, characterized by non-caseating granuloma.⁴ The 3rd most common organ involvement in sarcoidosis is liver. While liver involvement in sarcoidosis frequently demonstrates an asymptomatic course, it may also rarely demonstrate raucous course due to cirrhosis, portal hypertension, chronic cholestasis and Budd–Chiari. Hepatic granuloma may be detected in liver biopsy in approximately 50-65% of the cases.⁵ Elevation of cholestatic enzyme is observed in the

laboratory examinations, mainly being lymphopenia, elevated ACE level, hypercalcemia, hypercalciuria, alkaline phosphatase. Abdominal imaging is useful in the diagnosis of hepatic sarcoidosis. Hepatomegaly, splenomegaly hepatic nodules, focal calcifications may be detected. Diffused heterogeneity, fibrosis in liver parenchyma irregularity in hepatic contours are observed, if cirrhosis has developed. The result of liver biopsy is characterized by epithelioid non-caseating granuloma located in portal periportal area.⁶

Sarcoidosis is diagnosed by means of detection of sarcoidosis granulomas in the tissue biopsy along with the proper clinic radiological findings, and elimination of the other reasons which may cause granulomatous diseases in the tissue.² In our case, tuberculin skin test was anergic. No reproduction of mycobacteria and fungal culture was seen in lung and liver parenchyma biopsies; no malign cell was found in the cytology. There was no history of drug use which could cause granulomatosis reaction due to drug. As the antineutrophilic cytoplasmic antibody test of the patient was negative, granulomatosis vasculitis was not considered.

While lung and liver involvements frequently co-exist in cases in the literature; isolated hepatic involvement cases are seen rarely. These cases are usually not diagnosed until they become symptomatic. The isolated hepatic sarcoidosis case presented by Jovicić et al.³ applied with complaints of stomachache and abdominal distention, as different from our case, an appearance consistent with acid, splenomegaly and liver cirrhosis was detected in the abdominal imaging. The isolated hepatic sarcoidosis case presented by Tasbakan et al.³ applied with complaints of fever, weight loss and stomachache, as different from our case, and the result of parenchyma biopsy carried out due to detection of nodules in the liver in the visualization was found to be consistent with sarcoidosis.⁶ Our case was diagnosed with sarcoidosis with isolated liver involvement upon investigating etiology of the mild hypercalcemia. We deemed it worthy to be presented since our patient had asymptomatic

mild hypercalcemia as different from other cases in the literature.

Declaration

The authors have no conflicts of interest to declare.

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