Castleman's Disease of the Porta Hepatis

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ABSTRACT

Castleman's disease is an uncommon cause of lymph node enlargement that mostly involves the mediastinum and lung hilum. It is divided into 2 types: localized, which is usually asymptomatic and presents with a mass lesion; and multicentric, which is characterized by chills, anemia, generalized lymphadenopathy and hepatosplenomegaly. An extrathoracic site of involvement is very uncommon, and may be located in the mesentery of the intestines, axilla, and pelvis. Hepatic localization of this disease is a rare event. Herein, we report our experience with a symptomatic case of Castleman's disease in the porta hepatis who has been treated successfully by excision of the hilar lymph nodes, but recurred after 2 years with the same clinical picture plus abnormal liver function tests. However, at the time of recurrence ,no lymphadenopathy was detected and liver biopsy showed giant lymphoid follicles with germinal centers. She was treated with steroids and showed a dramatic response.

KEYWORDS
Castleman's disease; Liver hilum; Recurrence; Lymphoid nodular hyperplasia.

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INTRODUCTION

Castleman's disease or angiofollicular lymphoid hyperplasia is a rare cause of lymph node enlargement. It is divided into 2 types: localized, which is usually asymptomatic and presents with a mass lesion; and multicentric, which is characterized by chills, anemia, generalized lymphadenopathy and hepatosplenomegaly.[1] The most common site of involvement (in both types) is the mediastinum and hilum of the lung. Extrathoracic sites of involvement are uncommon, such as the mesentery of the intestines, axilla and pelvis.[2] Hepatic localization of this disease is a very rare event. Herein, we present an unusual case of Castleman's disease of the porta hepatis with atypical recurrence in the liver.

CASE REPORT

A 41-year-old female presented with easy fatigability. Physical examination was normal and there was no significant finding noted in her medical history. Hematologic studies revealed normal complete blood count (CBC) and a high erythrocyte sedimentation rate (ESR) of

110 mm/h. Biochemical analysis showed: total protein of 10.3 gr/dl, albumin of 3.6 gr/dl, and globulin of 6.7 gr/dl. Liver function tests, including alanine aminotransferase (ALT) and aspartate aminotransferase (AST), were normal. Serum protein electrophoresis showed hypergammaglobulinemia (5.7 gr/dl). Immunoelectrophoresis showed an IgG level of 4750 gr/dl; other fractions were decreased. Urine Bence-Jones protein was negative. Bone marrow aspiration and biopsy were also unremarkable. Abdominal CT scan showed several lymphadenopathies (LAP) in the hilum of the liver. The patient underwent exploratory laparotomy to find out the cause of the LAP. Very enlarged lymph nodes were noted in the porta hepatis (each almost 3 cm). Frozen section showed reactive lymph nodes. Therefore, all lymph nodes were excised and sent for pathologic studies.

Microscopic examination of the lymph nodes showed lymphoid follicles with small germinal centers bearing resemblance to Hassall's corpuscles of the thymus. Hyaline deposits were present within the germinal centers (Figure 1). With the diagnosis of Castleman's disease (hyaline vascular type), the patient was discharged from the hospital and followed with laboratory tests. After less than a month, she was completely free of symptoms; ESR and serum protein levels returned to normal. She remained well for 2 years when her symptoms of easy fatigability and loss of well-being returned. Physical examination was unremarkable with no LAP. Laboratory findings showed hypergammaglobulinemia and high ESR, but this time liver enzymes that included ALT (40 IU/L) and AST (36 IU/L) were also mildly elevated (normal <28 IU/L). Imaging studies were unremarkable and no sign of LAP was detected in the thorax and abdomen. All autoimmune and viral markers were negative. The decision was made to perform a liver biopsy. The microscopic section of the liver was unremarkable except for 2 to 3 scattered large lymphoid follicles with germinal center(s) (Figure 2). No evidence of hepatocellular injury or bile duct epithelial damage was noted. Serial cut sections were performed to determine characteristic findings of Castleman's disease, but the histologic picture was the same. Immunohistochemical studies of the liver showed follicles with CD20+ centrocytes and some centroblastic lymphocytes. Interfolliclular areas showed CD3+ T cells admixed with CD20+ B cells. No hyaline deposit or any angiofollicular hyperplasia was noted. With the diagnosis of giant reactive lymphoid nodular hyperplasia (LNH), possibly secondary to recurrence of Castleman's disease, the patient was treated with steroids. She showed dramatic response to treatment, and after less than 2 weeks, had relief from all physical signs and symptoms. After 2 months, the patient is currently on steroids (5 mg/day) and to be followed by imaging and laboratory tests.

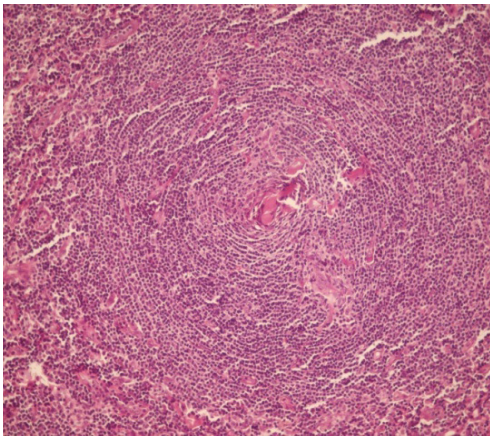

Fig 1: Sections from lymphnode show lymphoid follicles with central vessels. (H&E X 100).

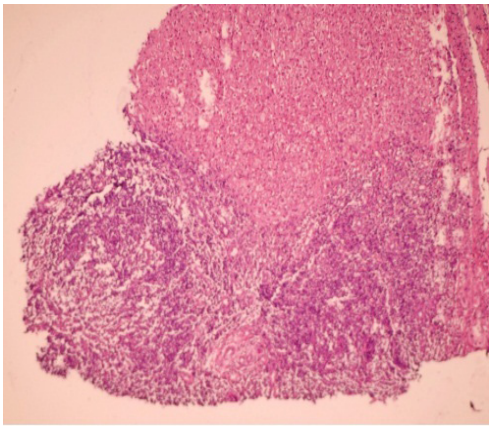

Fig 2: Sections from liver biopsy show large lymphoid follicles with germinal centers. (H&EX 250).

DISCUSSION

Castleman's disease has been first described by Castleman et al. in 1954.[3] It is a benign lymphoproliferative disorder most commonly located in the mediastinum. Extrathoracic sites of involvement are uncommon.[2] It is also called angiofollicular hyperplasia, giant lymph node hyperplasia, and lymph node hamartoma.[4] The pathogenesis of Castleman's disease is unknown. The disease is histologically divided in two major types: i) hyaline vascular (90%) and ii) plasma cell.[5] Castleman's disease can be both localized and solitary (80%), or less often, multicentric.[4]

Patients presenting with the hyaline vascular type are usually asymptomatic, however the plasma cell type is often symptomatic.[5] In the hyaline vascular variant, constitutional symptoms may occur, which are most frequently secondary to compression of the surrounding organs such as the tracheobronchial area.[6] Abdominal Castleman's disease presenting as a hepatic hilar mass is very uncommon.[2,6,7]

Our patient presented with constitutional symptoms and a hepatic hilar mass which was diagnosed as Castleman's disease after surgical excision and pathological studies. After surgery, she was completely well for 2 years when she developed easy fatigability, high ESR, hypergammaglobulinemia, and abnormal LFT. Imaging studies such as sonography and CT scan were normal. Liver biopsy showed giant reactive LNH. Although there was no definite histopathological finding of Castleman's disease, but the absence of any other positive autoimmune marker or LAP, and similarity of the signs and symptoms to her previous episode guided us to the possibility of a recurrence of Castleman's disease. The patient showed dramatic response to steroid therapy. We considered liver LNH as a possible evidence for the recurrence of Castleman's disease, which has not been previously reported before; overall recurrence in Castleman's disease is very rare.[8,9]

In previous reports, disease recurrence was similar to the first episode and until now, no case of hepatic LNH has been reported after Castleman's disease. There was just one report of a patient with liver LNH with angiofollicular hyperplasia that mimicked Castleman's disease and was treated with surgical excision.[10]

In conclusion, we consider our case to be a recurrence of Castleman's disease that mimicked LNH or association of these two diseases, which benefited from steroid therapy. Both of these possibilities have not been reported and should be considered in patients who have reactive LNH in the liver and Castleman's disease.

CONFLICT OF INTEREST

The authors declare no conflict of interest related to this work.

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