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Letters to the Editor

Langerhans cell histiocytosis: a rare cause of cholestasis in adult patients. Case report

Key words: Histiocytosis. Pancreatitis. Cholestasis.

Dear Editor,

We present a 42 year old man, with a history of central diabetes insipidus since childhood, primary hyperthyroidism with negative antibodies and seizures since early adulthood. He had undergone a cholecistectomy and received treatment with levothyroxin, desmopressin and lamotrigine.

One year before coming to our hospital for the first time, he had presented an episode of acute pancreatitis with pseudocyst formation. The treatment consisted in surgical drainage of the pseudocyst. However, a fistula formed, so a partial fail pancreotomy was performed. The pathological diagnosis was chronic pancreatitis. Ten months later, the patient showed analytical symptoms of cholestasis and imaging test evidence of dilation of the choledochus. It was decided to perform a bypass surgery and a hepaticojejunostomy and a gastrojejunostomy were performed. Nevertheless, three months later the patient came to our hospital due to persistent analytical cholestasis and weight loss (30 kg since the initial episode of acute pancreatitis), despite an adequate intake of calories.

A liver biopsy was performed after ruling out common pathologies. It was informed a cholestasis due to long term obstruction of large biliary ducts. In the course of the disease, pruritic erythematic lesions with papules appeared on the skin of the patient's torso. A biopsy of the lesions showed that these lesions were compatible with Langerhans cell histiocytosis. After the diagnosis of Langerhans cell histiocytosis in the skin biopsy, the liver biopsy simple was reviewed and histological sections were taken from the piece of pancreas. Langerhans cell histiocytosis was confirmed in both cases with S100 immunohistochemical staining.

The patient's liver function gradually worsened and he was taken to a centre of reference for a liver transplant, he died before it could be performed.

Discussion

There are two patterns of involvement: a single-system pattern, which may consist in unifocal or multifocal involvement in a single tissue or system (most often in bones and lungs), and a multi-system pattern, which involves several organs. The symptoms depend on the organ or organs involved. These are, in decreasing frequency: bone (a lytic lesion that causes pain), lung (dispnoea, tachypnea, pneumothorax), skin (skin rash), hypophysis (diabetes insipidus is a frequent onset symptom), adenopathies. Organs involved rarely: liver, spleen, central nervous system, thyroids, pancreas…

Liver involvement can present as chronic cholestasis or space-occupying lesions (1). Three histological patterns have been described: infiltration and destruction of small biliary ducts, destructive cholangitis involving the large biliary ducts, and masses of Langerhans cells as space-occupying lesions (2). Pancreatic involvement is very rare. It gives few symptoms, and it is usually diagnosed in the autopsy (3), where fibrosis may prevail over histiocytosic infiltration.

The diagnosis is based on pathological study of a biopsy of the organ involved. The main pathological finding is the presence of an accumulation of Langerhans histiocytes, which have distinctive nuclei features (a central "coffee bean" shaped folding, fine chromatin, and oval shaped nuclei) that distinguishes them from conventional histiocytes. An ultrastructural study by transmission electron microscopy reveals the presence of Birbeck granules, although the most widely-used technique to reach a diagnosis is immunohistochemistry (Langerhans cells are positive for staining with

S100, DC68 and CD1a). Accumulations of histiocytes are normally accompanied by fibrosis and a chronic inflammatory with a remarkable number of eosinophils (4,5).

The disease prognosis and its response to treatment is better in the single system form, particularly with bone involvement, and much worse in the multi-system form, especially if several risk organs are involved (liver, spleen, bone marrow and lung).

There is no standard therapy in adults due to the low number of existing cases, so treatment will depend on the degree of involvement. In the case of multi-systemic involvement, the best results seem to be obtained with prednisone and vinblastine for 6-12 months. However, if risk organs are involved, other chemotherapeutics are needed as well (6-mercaptopurine and metotrexate). When liver involvement is very important, however, and the above treatments could be toxic, the most effective option is liver transplant, which has low post-transplant relapse. Surgery is the accepted therapy for space-occupying lesions.

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