Case report

A High-Grade Lymphoma Presenting as Peritoneal Lymphomatosis

ABSTRACT

This case report describes an81-year-oldpatient, who was admitted to the hospital due to abdominal pain, increased abdominal perimeter, edema in the lower limbs and weight loss. Ascites was confirmed through ultrasound, although small amounts of fluid did not allow for study. Abdominal tomography revealed bowel loops crowding, omental cake and ascites; therefore, exploratory laparoscopy was indicated. Peritoneal biopsies were taken, and the diagnosis of peritoneal lymphomatosis was confirmed.

Aim: To present an unusual case of peritoneal lymphomatosis as a cause of ascites.

Keywords:Peritoneal lymphomatosis, Ascites, Non-Hodgkin's lymphoma, Abdominal pain.

1. INTRODUCTION

Extranodal lymphomas account for about 40% of non-Hodgkin's lymphomas and the gastrointestinal tract being one of the main organs affected (1). Peritoneal lymphomatosis is the diffuse involvement of the peritoneal cavity secondary to high-grade lymphoma. This involvement produces ascites and abdominal pain, which is an uncommon cause of ascitic syndrome, with tuberculosis and peritoneal carcinomatosis being the main differential. Among the auxiliary tests, the abdominal tomography is very useful and the finding of caking of the intestinal loops could suggest a diagnosis of peritoneal lymphomatosis (1)(2). Peritoneal biopsy is the main test used to diagnose this entity. Timely treatment offers a good prognosis.

2. CASE PRESENTATION

An81-year-oldman with a past medical history of type 2 diabetes mellitus and hypertension, presented to the emergency department with a progressive lower limb edema that was extending upwards, causing abdominal distention and volume overload over the past two weeks. He had also experienced a 3-kilogram weight loss in the last month, along with mild abdominal pain and dyspnea one week prior to the admission. Physical examination revealed edema in the lower limbs, decreased vesicular breath sounds and a distended

abdomen. Chronic liver disease, renal disease, and heart failure were excluded as potential causes of the volume overload.

Ultrasound confirmed the presence of ascites and abdominal tomography reveled "caked intestinal loops" with multiple enlarged mesenteric lymph nodes, thickening of the omentum and mesentery thickening with faint enhancement. Multiple mesenteric and peripancreatic adenopathies were also observed. Ascitic fluid analysis reported turbid, reddish fluid, with high leukocyte counts, low glucose levels and elevated protein and LDH levels. Exploratory laparoscopy further revealed ascitic fluid in all four quadrants, omental adhesions, and multiple adenopathies throughout the parietal peritoneum, serosa of the small intestine and mesentery. The immunohistochemistry (IHC) study determined positive immunophenotype for CD20 and BCL2 and negative for CD3, CD30 and C10. Finally, the peritoneal biopsy was consistent with lymphoproliferative disease, which confirmed the diagnosis of high-gradenon-Hodgkin's lymphoma and peritoneal lymphomatosis. Once the patient was diagnosed, he was transferred to a tertiary medical center to continue treatment. For that reason, the chemotherapy regimen he received is unknown.

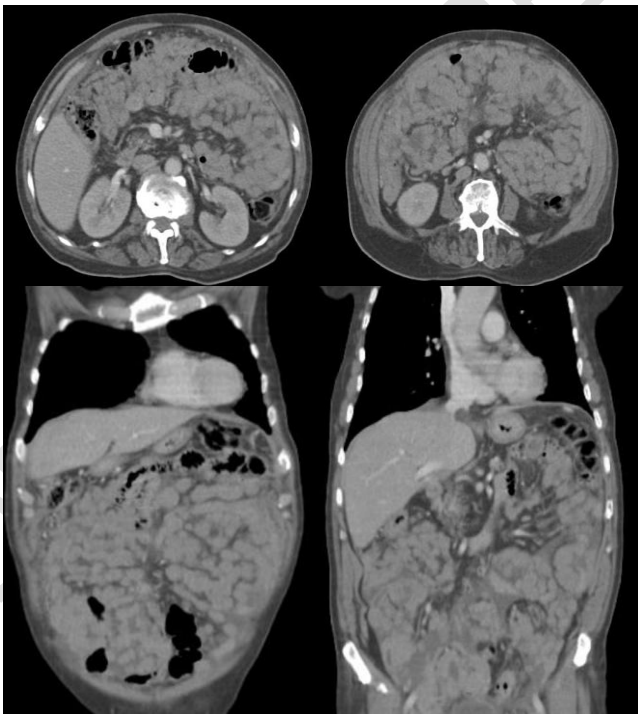

Figure 1. Presence of appeased bowel loops with multiple enlarged mesenteric lymph nodes. Omental thickening (Omental Cake). Presence of free liquid in inframesocolic space, interasas, retrovesical. Thickening of the peritoneum with faint enhancement.

3. DISCUSSION

Peritoneal Lymphomatosis (PL) is an uncommon condition in which the peritoneum is invaded by lymphoid cells. The diagnosis of PL could be challenging due to the non-specific symptoms at presentation (1)(2); indeed, to confirm this entity it is crucial to rule out other possible causes that affect the peritoneum. The most common lymphomas associated to PL are diffuse large B cell lymphoma, Burkitt's Lymphoma, lymphoblastic lymphoma and follicular lymphoma (3)(4). Our patient presented with typical clinical manifestations of PL, including abdominal pain, edematous ascitic syndrome, and weight loss. Imaging features such as absence of septations in the ascitic fluid, lymph nodes involvement and aneurysmal dilatation of an intestinal segment with parietal thickening also suggest PL (5)(6).

When lymphomas affect the peritoneum and lymphomatosis is suspected, the most common findings on computed tomography are peritoneal lymphadenopathy (positive when the short axis node detected is larger than 10 mm), omental and mesenteric mass (increased density in the form of infiltrations or bulky masses), peritoneal involvement (linear or nodular thickening of the peritoneum). In addition, ascites and the involvement of other organs are also described. Although the findings described are characteristic of peritoneal lymphomatosis, it is important to consider that gynecologic and gastrointestinal malignancies can cause similar appearances. For these reasons, diagnosing PL based on imaging alone can be difficult, and a histopathological confirmation is necessary (7)(8)(9).

In this case, the patient was admitted to perform ascitic fluid analysis and peritoneal biopsy. Laparoscopic access has a higher sensitivity for diagnosis compared to tomography, being 100% and 47.8% respectively (6). Therefore, the patient underwent diagnostic laparoscopy to take biopsies of the peritoneum and peritoneal lymph nodes which confirmed the diagnosis of large B-cell non-Hodgkin's lymphoma. Surgical management followed by adjuvant chemotherapy is the treatment of choice for PL and is indicated as the first option in case of hemorrhage, perforation, occlusion and in patients who are resistant to other treatments. The overall 5-year survival rate of primary intestinal lymphoma is 53-86.4% if chemotherapy is started early (7)(10).

4. CONCLUSION

In summary, PL is a challenging condition due to its non-specific symptoms and rarity. Imaging features may suggest PL, but a histopathological confirmation is necessary. Surgical management followed by adjuvant chemotherapy is the treatment of choice for PL. The patient of this case underwent diagnostic laparoscopy plus biopsy which finally confirms the diagnosis of large B-cell non-Hodgkin's lymphoma.

5. CONSENT

In accordance with international standards, writtenconsent has been collected and preserved by the authors.

6. ETHICAL APPROVAL

The information obtained has been collected and preserved by the authors, protecting the confidentiality of the data provided, thus following the Helsinki parameters.

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