Case Report

Ovarian lymphoma in a patient on long-term sulfasalazine for ulcerative colitis

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Abstract

We report a case of ovarian lymphoma in a 59 year old woman with ulcerative colitis for over 20 years. She presented with intermittent high fever and right sided abdominal pain for 3 weeks. An ultrasound scan and CT scan revealed a right adnexal mass measuring 71 x 54 mm which was well defined with a thick wall and internal septations and enlarged pelvic and para aortic lymph nodes. The patient underwent bilateral salpingo oophorectomy and omentectomy. Histology confirmed a diffuse large B cell Non Hodgkin's lymphoma and she was referred for chemotherapy. After 6 cycles of chemotherapy she showed a good response. Lymphoma of the gastrointestinal tract arising in a background of ulcerative colitis has been known to occur,ovarian lymphoma with a background of ulcerative colitis has not been reported.

Keywords: Ovarian lymphoma, Ulcerative Colitis, Non-Hodgkin's lymphoma,Ovarian

Introduction

Lymphoma of the ovary can be either primary or secondary with primary ovarian lymphoma (POL) having a better prognosis than secondary lymphoma.[1]

It is a rare condition encountered by the gynecologists and it can mimic ovarian malignancy or Meigs syndrome.[2] Non-Hodgkin Lymphoma (NHL) accounts for 1.5% of all ovarian neoplasms.[2] POL which is much rare and accounts for only 0.5% of all NHLs.[3,4]

Case Report

A 59-year-old woman with ulcerative colitis on sulfasalazine for 22 years, presented with fever for 3 weeks' duration associated with right-sided abdominal pain. Ulcerative colitis was in remission with sulfasalazine 1 g twice a day. She was not treated with other immunomodulators such as azathioprine.

On examination, she was febrile, not pale, and had no generalized lymphadenopathy. There was right iliac fossa tenderness. There were no palpable abdominal masses or ascites. On vaginal examination, there was a palpable adnexal mass with bilateral adnexal tenderness.

Full blood count showed a hemoglobin of 10.5 g/L, a white cell count of 10.38 × 10^6/μl and a platelet count of 540,000/μl. The peripheral blood picture did not show any abnormal cells.

The C-reactive protein (CRP) was 100 mg/L (normal range 0–5 mg/L) and erythrocyte sedimentation rate (ESR) was 60 mm/hr (normal range 0–20 mm/hr) with elevated lactate dehydrogenase (LDH) of 2891 U/L (normal range 140 U/L–280U/L). Her urine, blood cultures, and chest x-ray were

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Received: 14-10-2019 **Revised:** 05-12-2019
Accepted: 11-12-2019 **Published:** 28-01-2020

Access this article online

Quick Response Code:

Website: www.jfmpc.com

DOI: 10.4103/jfmpc.jfmpc_886_19

How to cite this article: Kaluarachchi A, Bambaranda BG, Jayawardena UG, De Silva HJ, Matwani SM, Rameshkumar U. Ovarian lymphoma in a patient on long-term sulfasalazine for ulcerative colitis. J Family Med Prim Care 2020;9:442-4.

negative for infection. She tested negative for hepatitis B surface antigen, dengue NS1 antigen, and HIV 1 and 2.

Ultrasound scan and CT abdomen revealed a large complex adnexal mass of 71 × 54 mm in size with enlarged bilateral pelvic lymph nodes and enlarged para-aortic lymph node masses encasing aorta and common iliac vessels. CT of the chest was normal.

She underwent exploratory laparotomy, bilateral salpingo-oophorectomy and omentectomy [Figure 1]. There were enlarged pelvic and para-aortic lymph nodes noted at surgery. Hysterectomy was not performed due to technical difficulty in the presence of enlarged lymph nodes. Histology confirmed diffuse large B-cell NHL of the ovary. Immunohistochemical assays were positive for CD 20, CD 3 with 30–40% proliferative activity with Ki 67. Bone marrow trephine biopsy revealed a normocellular marrow.

The patient underwent six cycles of chemotherapy with rituximab, cyclophosphamide, doxorubicin hydrochloride, vincristine sulfate, and prednisone (R-CHOP) regime. A repeat CT after four cycles of chemotherapy showed a good response with the absence of enlarged pelvic nodes. She completed six cycles of chemotherapy and the latest CT scan revealed no residual disease.

Discussion

Ovaries can be affected in lymphoma by either primary or secondary involvement. The usual age at presentation in women is in their fifth decade.[3,4] Ovarian lymphoma is known to occur in younger females.[5] Most of the primary and secondary ovarian lymphomas are diagnosed incidentally. Patients may present with B symptoms (fever, night sweats, and weight loss) as in the case of our patient.[3] Most often the patients present to the primary care physician with these symptoms and the possibility of lymphoma should be considered when there is poor response to initial treatment.

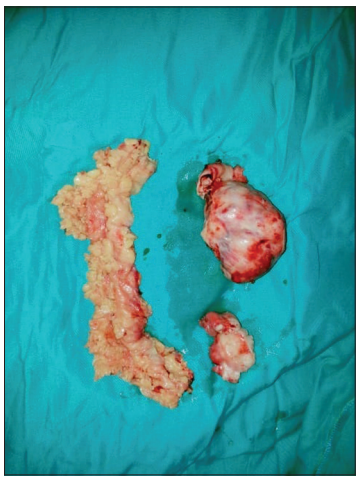

Figure 1: Ovaries and omentum removed in surgery

Our patient presented with fever and abdominal pain for 3 weeks. The clinical examination and high CRP was suggestive of a pelvic infection, for which she was initially treated with poor response. Elevated serum LDH levels together with enlarged pelvic lymphadenopathy led to the suspicion of lymphoma.

Patients with inflammatory bowel disease are at risk of other malignancies, lymphoma being one of them.[6] It is important for the primary care physician to be aware of the possibility of developing malignancies in patients with inflammatory bowel disease. Cohort studies in patients with ulcerative colitis have not shown an increased risk of developing lymphoma due to the disease itself,[7] but there is evidence that immunomodulators such as azathioprine and antitumor necrosis factor treatment can increase the risk of lymphoma.[7] However, sulfasalazine, which is also an immunomodulator, has shown inhibitory effects on lymphoma cell proliferation *in vitro* studies.[8] It is unusual that our patient developed NHL of the ovary despite being on sulfasalazine for 22 years with its known anti-proliferative effect.[8]

She had never been on other immunosuppressants such as azathioprine. Although patients with ulcerative colitis are known to have an increased risk of ovarian cancer,[9] a higher risk of ovarian lymphomas has not been reported. This is the first report of an ovarian lymphoma arising in a patient with longstanding ulcerative colitis treated with sulfasalazine, although a causal association cannot be established.

POL is usually diagnosed by using the criteria laid down by Fox *et al*.[10] According to these criteria, POL can be diagnosed when (a) the disease is confined to ovary and investigations fail to reveal lymphoma elsewhere. It is considered primary even when only immediately adjacent lymph nodes are involved, (b) absence of abnormal cells in peripheral blood and bone marrow, (c) newer extra ovarian deposits if any should appear at least 6 months after the detection of the primary site.[10]

Our patient had only ovarian and its adjacent draining lymph node involvement, normal bone marrow biopsy and absent abnormal cells in the peripheral blood fit into the diagnosis of POL.

The disease is staged based on Ann Arbour classification to provide prognostic information as well as to assist therapeutic decision-making.[10] Our patient was classified as having stage III B lymphoma. The management is done usually after confirmation of diagnosis by biopsy and chemotherapy in contrast to more radical surgery undertaken in other ovarian malignancies. Lymphoma of the ovary should be considered as a differential diagnosis when women around 40–50 years of age present with an adnexal mass.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have

given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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