

Toxoplasma Lymphadenitis mimicking Non-Hodgkin's lymphoma: A case reportDr. Sugeeth M.T¹, Dr. Jayasudha A.V², Dr. Rony Benson³, Dr. Sreejith G Nair⁴¹Senior Resident, Department of Medical Oncology, Regional Cancer Centre, Trivandrum 695011, India.²Assistant professor, Department of Pathology, Regional Cancer Centre, Trivandrum 695011, India.³Senior Resident, Department of Medical Oncology, Regional Cancer Centre, Trivandrum 695011, India.⁴Additional professor, Department of medical oncology, Regional Cancer Centre, Trivandrum 695011, India.***Corresponding author**

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Article History

Received: 04.09.2017

Accepted: 09.09.2017

Published: 30.09.2017

DOI:

10.36347/sjmcr.2017.v05i09.025



Abstract: Toxoplasmosis is an infection with a worldwide distribution caused by the intracellular protozoan parasite, toxoplasma gondii. Immunocompetent persons with primary infection are usually asymptomatic, but latent infection can persist for the life of the host. There is risk of reactivation at a later time when individual become immunocompromised. Treatment is rarely necessary since most clinical illness resolves spontaneously. We report a 68 year old lady presented with generalised lymphadenopathy with suspected non hodgkins lymphoma, later diagnosed to have acute toxoplasmosis. Patient didn't have any treatment, she is asymptomatic and under follow up at 1 year.

Keywords: Toxoplasmosis, protozoan parasite, toxoplasma gondii, hodgkins lymphoma.

INRODUCTION

The number of differential diagnoses for persistent generalised lymphadenopathy is large and lack of specific investigations or equivocal interpretation of some investigations can make establishing a definitive diagnosis difficult. We report a patient with generalised lymphadenopathy initially referred as non-Hodgkin's lymphoma (NHL) and subsequently diagnosed to have acute toxoplasmosis.

CASE REPORT

A sixty eight year old lady presented to us in 2009 with history of lump in right breast of 6 months duration. On examination she had 5 x 4 cm lump in the right breast, upper outer quadrant without axillary lymphadenopathy. Other systems were within normal limits. FNAC of the lump was suggestive of ductal carcinoma. Patient underwent right modified radical mastectomy and had infiltrating ductal carcinoma, Nottingham histologic grade III. She had early stage breast cancer and she received adjuvant combination chemotherapy (Adriamycin+ cyclophosphamide x 4 cycles followed by paclitaxel x 4 cycles every 3 weeks). Since her oestrogen and progesterone receptor status were positive, she was treated with adjuvant hormonal agent, letrozole with calcium supplementation for 5 years. She completed her treatment on September 2015. She was asymptomatic and had regular follow up with annual mammogram at our oncology clinic.

In June 2016 she presented with cervical lymphadenopathy. There was no fever, loss of appetite, loss of weight. She had good performance status. On examination she had generalised lymphadenopathy,

there was no hepatosplenomegaly. Computed tomography (CT) of abdomen and pelvis showed multiple enlarged intraabdominal lymph nodes with evidence of chronic liver disease (Figure1). CT chest showed multiple cervical lymph nodes with swelling at the medial end of clavicle. The differential diagnosis considered were metastatic carcinoma breast, second malignancies like lymphoma and infectious agents, especially tuberculosis. FNAC from the cervical lymph node was suggestive of nonhodgkins lymphoma. Excision biopsy of the lymph node was done. Histopathologic examination of the lymphnode showed prominent reactive follicles with germinal centres. Paracortex showed multiple small clusters of histiocytes and epithelioid cells encroaching into the follicles and germinal centres (Figure 2). It was suggestive of reactive change lymphnode compatible with Toxoplasma lymphadenitis. IgM toxoplasma came positive in this patient. Bone marrow study, mammogram and bone scan were within normal limits. Immunocompetent, nonpregnant patients do not require treatment unless symptoms are severe or prolonged, our patient is asymptomatic and is under regular follow up at 1 year.



Fig-1: Contrast CT scan (axial section) of abdomen showing multiple contrast enhancing intraabdominal lymph nodes

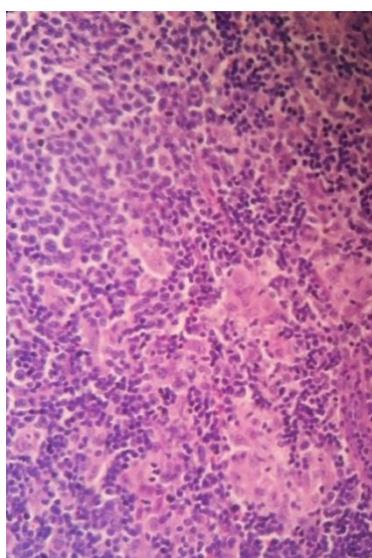


Fig-2: Lymph node biopsy showing reactive follicles with prominent germinal centre, paracortex showed small clusters of histiocytes and epithelioid cells encroaching into the the follicles compactible with toxoplasma lymphadenitis

DISCUSSION

Toxoplasmosis, an infection caused by the intracellular protozoan parasite, *Toxoplasma gondii*. Humans can acquire toxoplasma infection via ingestion of contaminated meat, through vertical transmission, via blood transfusion or organ transplantation. Eighty to 90 percent of acute *T. gondii* infections in immunocompetent hosts are asymptomatic [1]. When symptomatic infection does occur, the most common manifestation is bilateral, symmetrical, non-tender cervical adenopathy [2]. The lymph nodes are usually smaller than 3 cm in size and are non-fluctuant. Most immunocompetent patients have a benign, self-limited course lasting from weeks to months, rarely longer than a year [3]. Lymphadenopathy usually resolves, but in rare cases may persist chronically. Patients may have a slight lymphocytosis or atypical lymphocytosis, usually less than 10 percent of the total leukocyte count. On histopathologic examination, lymph nodes typically have follicular hyperplasia, focal distension of sinuses with monocytoid cells, and irregular clusters of tissue

macrophages with eosinophilic cytoplasm. Parasites may also be detectable with DNA amplification by polymerase chain reaction (PCR) [4]. In the immunocompetent host with acute onset of lymphadenopathy, diagnostic testing should include serology. In the patient with IgM antibodies alone with subsequent seroconversion, a diagnosis of toxoplasmic lymphadenitis can be made; in the patient without any evidence of either IgM or IgG antibodies, the diagnosis is eliminated.

Immunocompetent, nonpregnant patients generally do not require treatment unless symptoms are severe or prolonged beyond a few weeks [5]. The medications used for treatment in these circumstances are the same as those administered for toxoplasmosis in immunosuppressed patients, but lower doses generally sufficient. Treatment is usually given for two to four weeks. The commonly used two regimens are Pyrimethamine plus sulfadiazine and Pyrimethamine plus clindamycin.

It is important for the physician to follow up patients with toxoplasmosis as they may require treatment for progressive or persistent symptoms and there is a chance that both non Hodgkins lymphoma and toxoplasma lymphadenitis can coexist.

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