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BMH Med. J. 2022;9(4):96-98. **Interesting Clinical Image**

Toxoplasmosis in an Immunocompetent Child - An Unusual Cause of Cervical Lymphadenopathy

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Case Description

A young, previously healthy child presented with progressively increasing painless swelling in left side of the neck for one month. There was no history of TB contact, fever or any other constitutional symptoms. On examination, level V cervical lymph node was enlarged (**Figure 2**), approximately 2 x 2 cm size, which was mobile and non-tender. There was no other lymphadenopathy or hepatosplenomegaly. Routine blood investigations were within normal limits. Swelling progressed in size in-spite of treatment with multiple courses of oral antibiotics. Excision biopsy of the lymph node was done and histopathology showed lymph node follicles with reactive germinal centres and interfollicular area showing small collections of epitheliod histiocytes (micogranuloma) and monocytoid cells, suggestive of toxoplasma lymphadenitis (**Figure 2**). IgM toxoplasma serology was also positive, which confirmed the diagnosis. Fundus examination, CT Brain and USG abdomen were normal, ruling out any other organ involvement. Child was worked up for primary and secondary immunodeficiency. Lymphocyte subset, immunoglobulin profile and NBT-DHR were normal. Tuberculosis workup and HIV serology were negative. In view of the immunocompetent status, child was not given any specific medications. Post excision, child has remained asymptomatic on three months follow-up.

Figure 1: Cervical lymph node swelling

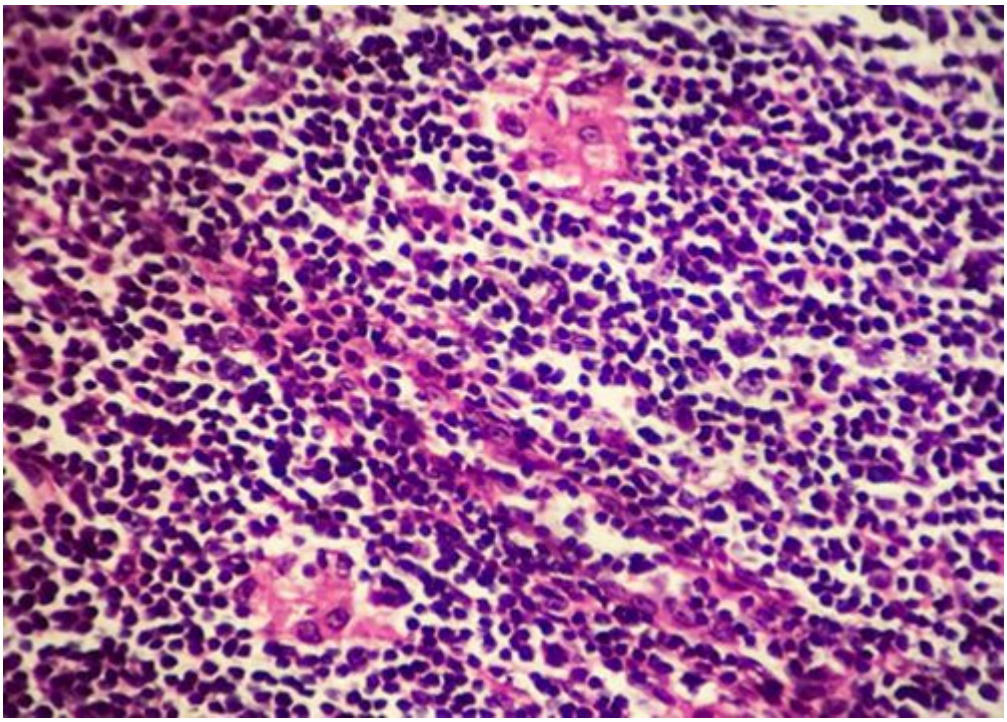

Figure 2: Histopathology of lymph node showing interfollicular area showing small collections of epithelioid histiocytes (microgranuloma) and monocytoid cells

Toxoplasmosis, a parasitic disease caused by the protozoan Toxoplasma gondii can infect most of the warm-blooded animals. Humans get infected from ingestion of improperly cooked animal meat or by ingestion of food contaminated with cat faeces with infective oocysts. Transplacental infection can also occur. In most of the immunocompetent cases, acquired Toxoplasma infection is asymptomatic. In 10-20% of the patients, it can cause mild symptoms like low-grade fever, cervical lymphadenopathy, fatigue and joint pain [1]. However, in immunocompromised patients, the infection can cause systemic

manifestations with different organ involvement including the central nervous system, cardiac involvement, and chorioretinitis [2]. Congenital toxoplasmosis has diverse presentations ranging from fetal hydrops and perinatal death to prematurity, persistent jaundice, thrombocytopenia, and the characteristic triad of chorioretinitis, hydrocephalus, and cerebral calcifications. Diagnosis of toxoplasma lymphadenitis can be made by the histopathologic criteria and confirmed by serologic studies and PCR [3,4]. The histopathologic changes in toxoplasma lymphadenitis are characteristic and often diagnostic. In general, the clinical course of toxoplasmosis is self-limited. Patients with lymphadenopathy in the head and neck regions, without systemic manifestations, don't need any specific drugs. Lymphadenectomy may be considered in cases of progressive lymph node swellings. Pyrimethamine and sulfadiazine are the treatment of choice in severe cases and immunocompromised patients [5].

References

1. Montoya JG, Liesenfeld O. Toxoplasmosis. Lancet. 2004;363(9425):1965-76.

2. McAuley JB. Toxoplasmosis in children. Pediatr Infect Dis J. 2008;27:161-2.

3. Edvinsson B, Lappalainen M, Anttila VJ, Paetau A, Evengard B. Toxoplasmosis in immunocompromized patients. Scand J Infect Dis. 2009;41:368-71.

4. Eapen M, Mathew CF, Aravindan KP. Evidence based criteria for the histopathological diagnosis of toxoplasmic lymphadenopathy. J Clin Pathol. 2005;58:1143-1146.

5. Liu Q, Wang ZD, Huang SY, Zhu XQ. Diagnosis of toxoplasmosis and typing of Toxoplasma gondii. Parasit Vectors. 2015;8:292.