Case Report / Olgu Sunumu

Toxoplasmosis lymphadenitis mimicking a parotid mass

Parotis kitlesini taklit eden toksoplazma lenfadeniti

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Toxoplasmosis is caused by an obligate intracellular protozoan, Toxoplasma gondii, which can infect birds and mammals including humans. The disease is common throughout the world, and the most common clinical form is generalized or localized lymphadenopathy. However, in the literature, toxoplasmosis manifesting as a parotid mass is extremely rare. A 37-year-old female was admitted to our department with a painless mass in the parotid region, which had been present for one month. Upon physical examination, a hard, mobile, superficially located, and painless parotid mass with a size of 2x2 cm was detected. Following the diagnosis of a parotid neoplasm, a superficial parotidectomy was performed. Histopathological examination of the surgical specimen supported a diagnosis of toxoplasmosis lymphadenitis. Specific serum immunoglobulin levels were studied and results also confirmed the diagnosis of toxoplasmosis. The patient was given rovamycine for three weeks, and on 12 months follow-up, the patient was still free of recurrence.

Key Words: Lymphadenitis; parotid diseases; parotid gland; toxoplasmosis.

Toksoplazmosis, kuşlar ve insanlar dahil olmak üzere memelileri enfekte edebilen bir zorunlu hücre içi protozoon olan Toxoplazma gondii tarafından oluşturulan bir enfeksiyondur. Hastalık dünyanın her bölgesinde yaygındır ve en sık görülen klinik şekli yaygın veya bölgesel lenfadenopatidir. Ancak parotis kitlesi şeklinde ortaya çıkan toksoplazmosis literatürde oldukça nadir bildirilmiştir. Otuz yedi yaşında bir kadın bir aydır olan parotis bölgesindeki ağrısız kitle nedeniyle kliniğimize başvurdu. Fizik muayenede 2x2 cm boyutlarında, sert, hareketli, yüzeyel yerleşimli ve ağrısız bir parotis kitlesi tespit edildi. Parotis neoplazmı tanısı ile yüzeyel parotidektomi uygulandı. Histopatolojik inceleme sonucu, toksoplazma lenfadeniti tanısını desteklemekteydi. Çalışılan spesifik serum immünoglobulin değerleri de toksoplazmosis tanısını doğruladı. Hastaya üç hafta süreyle rovamycine tedavisi uygulandı ve 12 aylık takibinde hastalık nüksüne rastlanmadı.

Anahtar Sözcükler: Lenfadenit; parotis hastalığı; parotis bezi; toksoplazmosis.

Toxoplasmosis is a parasitic infection caused by Toxoplasma gondii. The major mode of transmission to humans is the ingestion of infected meat.[1] Most cases are asymptomatic or present with a flu-like picture, and the main clinical manifestation is characterized by localized or generalized lymphadenopathy.[1] Radiologic studies are not useful; only laboratory studies can confirm a diagnosis of toxoplasmosis.

In the literature only a few cases of toxoplasmosis manifesting as parotid mass have been reported.[2-9] In this article, we report a case of toxoplasmic lymphadenitis mimicking a parotid mass.

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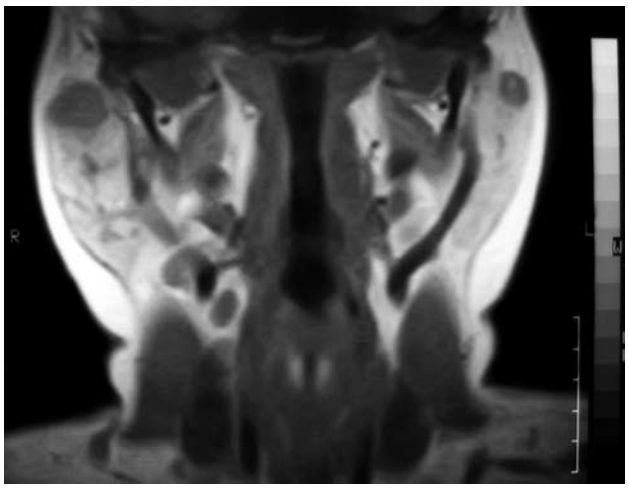

Figure 1. *Coronal T1-weighted magnetic resonance image of the neck demonstrates multiple intraparotid lesions.*

CASE REPORT

A 37-year-old female was admitted to our department, with a painless mass in the right parotid area which had been present for one month. She denied a change in size and had no history of fever or illness. The patient had a history of travel to Libya. The patient was given a course of antibiotics by a primary care physician but the mass did not respond.

On physical examination, the patient appeared well and was afebrile. Examination of the patient revealed a 2x2 cm hard, mobile, superficially-located, painless mass in the right preauricular region. No other palpable cervical lymph node or mass was detected and facial nerve functions were normal. Other otolaryngologic and general physical examination was essentially normal.

Routine laboratory investigations were also normal. On magnetic resonance imaging, two solid, well-circumscribed, non-infiltrating masses measuring 22 mm and 10 mm in diameter were identified in the superficial lobe of the right parotid gland (Figure 1). In the left superficial parotid lobe, three different lesions measuring smaller than 1 cm were also detected.

The clinical impression at that time was a parotid tumor and the patient was advised to undergo excision. She thus underwent a right superficial parotidectomy. Pathologic examination revealed normal parotid parenchyma with enlarged lymph nodes. Focal proliferation of epitheloid histiocytes with eosinophilic cytoplasm occuring singly or in clusters were present along with capillary proliferation (Figure 2). These findings supported a diagnosis of toxoplasmosis lymphadenitis. To confirm the diagnosis of toxoplasmosis, Toxoplasma immunoglobulin M (IgM) and immunoglobulin G (IgG) serum titers were studied and were strongly positive: Toxoplasma IgM was 959 AU/mL (normal <100 AU/mL) and Toxoplasma IgG was >542 IU/mL (normal <4.0 IU/mL).

From further questioning of the patient it was also learnt that the patient had a history of ingestion of undercooked meat. The postoperative course was uneventful and the patient was treated with rovamycine for three weeks. On follow-up 12 months postoperatively, the patient was still free of recurrence.

DISCUSSION

Toxoplasmosis is a ubiquitous infection caused by the protozoan Toxoplasma gondii. Many species of warm-blooded animals may serve as intermediate hosts; however, cats are the only recognized definitive hosts.[1] In humans, transmission of the

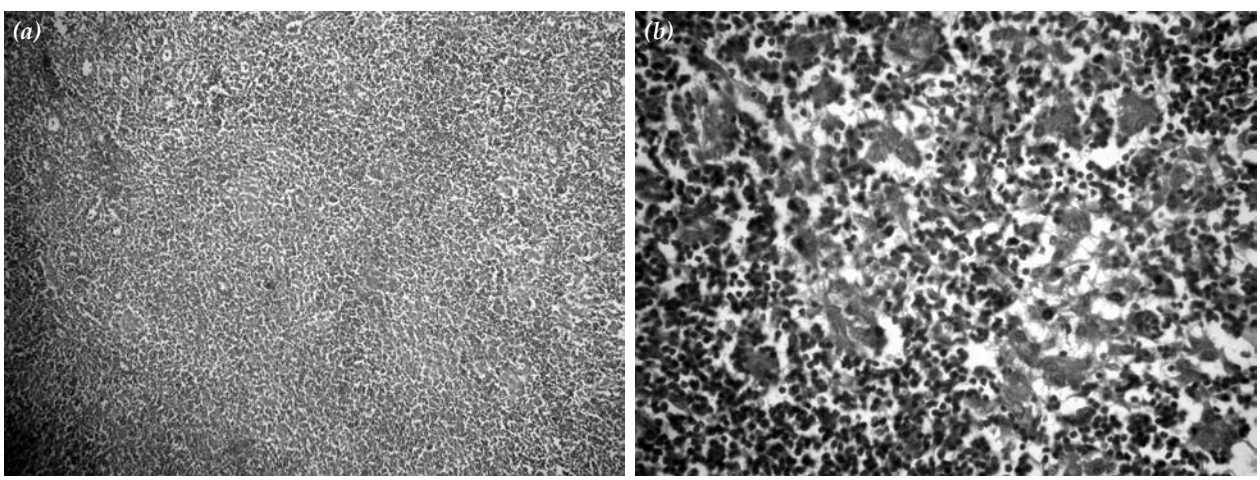

Figure 2. ***(a)*** *Histiocytes forming groups in the lymph node. (H-E x 100),* ***(b)*** *High power view of histiocyte groups (H-E x 400).*

organism may occur transplacentally, after organ transplantation and blood transfusion. However, infection is mainly acquired through ingestion of food or water that is contaminated with oocysts shed by cats or by eating undercooked or raw meat containing tissue cysts.[1]

In the congenital form, the disease can cause spontaneous abortion, chorioretinitis, cerebral calcification, microcepahly, mental and motor retardation and congenital deafness. However the primary infection in children, pregnant women and adults is mostly asymptomatic.[1] The most common clinical manifestation is cervical or occipital lymphadenopathy.[10] Lymph nodes are non-tender, non-suppurative, usually discrete masses, and become smaller in 4-6 weeks.[1] A form of the disease characterised by chronic lymphadenopathy has been also described, and lymph node enlargement can fluctuate for months.[1]

Toxoplasma gondii infection can be diagnosed indirectly with serological methods and directly by polymerase chain reaction, hybridisation, isolation, and histology.[1] The most reliable technique for the diagnosis of toxoplasmosis is tissue culture, or to isolate the parasite through intraperitoneal inoculation of mice.[1] However, these techniques are not routinely done, and serologic tests have been the major tool for the diagnosis of toxoplasmosis, in conjunction with the findings on lymph node histology.

Histopathological changes in toxoplasmic lymphadenitis in immunocompetent individuals are frequently distinctive and sometimes diagnostic. These consist of reactive follicular hyperplasia, irregular clusters of epithelioid histiocytes encroaching on and blurring the margins of the germinal centres, and focal distension of sinuses with monocytoid cells.[1] Langerhans giant cells, granulomas, microabscesses, foci of necrosis, and parasites are not typically seen or detected.

In general, the clinical course of toxoplasmosis is self-limited.[10] Immunocompetent adults and children with toxoplasmic lymphadenitis are usually not treated unless symptoms are severe or persistent.

Hyperplastic changes occuring in intraparotid and periparotid lymph nodes may mimic a parotid neoplasm. Presentation of toxoplasmosis as a parotid mass secondary to involvement of the intraglandular nodes found within the parotid gland is a rare occurance. Our review of the literature revealed that only a few cases of parotid toxoplasmosis have been reported previously.[2-9] However toxoplasmosis should be kept in mind, especially if a patient has a history of travel, exposure to pets or ingestion of undercooked meat.

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