Lymphoma of base of The Tongue, Consideration to mycological examination along with immunohistochemistry: A Case report

Case Report

Ali Farzanegan1, Mohammad Ashtiani Najafi2, Mehraban. Falahati3

1Department of Parasitology and mycology, Guilan University of Medical Science, Anzali International campus, Guilan, Iran.
2Department of Pathology and Histology, Guilan University of Medical Science, Rasht, Guilan, Iran.
3Department of Parasitology and mycology, Iran University of Medical Science, Tehran, Iran.

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Corresponding Author:
Ali Farzanegan
Address:
Department of Parasitology and mycology, Guilan University of Medical Science, Anzali International campus, Guilan, Iran
Telephone: +989119829233
Email: ali.farzanegan@gums.ac.ir

Abstract

Malignant Lymphoma of the Head & neck (oral cavity or buccal mucosa) is uncommon and of the tongue fewer. Commensal bacteria and fungi that may become pathogenic often colonize the oral cavity and cause severe problems in people with cancer and immunocompromised. We describe a 76-year-old man with a history of dysphagia and a bulk lesion from his base of the tongue that was diagnosed as diffuse B cell lymphoma. He was followed up with Doxorubicin, Rituximab, Vincristine sulfate and radiotherapy. However, oral lymphoma of the tongue is very uncommon and it should be review in the differential assessment of numerous malignant lesions in this region. Due to weakened immune system and susceptible to infection in cancer patients, attention to opportunistic microorganisms, especially fungi that cause severe problems in cancer patients, can help them to choose better treatment. Fungal culture from new samples and genotyping of microorganisms along with Immunohistochemistry of biopsy can monitor treatment and clinical follow-up.

Key words: •Tongue, fungi •B cell lymphoma •immunohistochemistry.
Case Report

At the August in 2017, a 76-year-old heavy smoker man with a height of 172 and weighing 70 kg noticed for the first time a change of the left side on the tongue with progressive dysphagia and throat discomfort, but no complaints of weight loss, night sweats or fever. He was admitted to the Ear, Nose and Throat clinic of the Amiralmomenin Hospital (Rasht, Guilan, Iran). Oral investigation showed a clear irregularity of the tongue base. There was no ulceration on the surface of the tongue. No x-rays and oral exams were performed except CT scan but Systemic examination including a respiratory, cardiac, central nervous system was normal with CT scan (computed tomography) and armpit, groin, neck, jaw and abdominal were evaluated for lymph nodes and were normal. CT scan revealed a raised mass in the base of the tongue (figure 1).

A biopsy, consists of cream- brown elastic tissues with totally measuring 1.4 × 1.4 × 0.5 cm, was performed fragment of buccal mucosa, sub epithelial stroma diffusely by small to medium-sized atypical lymphocytes some with nucleoli (figure 2).

The mucosa in foci covered by fibrinoleukocytic exudate admixed with fungal structure (figure 3) and Actinomyces (figure 4) (PAS staining).

Figure 1. Computed topography of the Head & neck before treatment showing resolution of the mass

Figure 2. Histological examination of the tumor process (PAS, x4)

Figure 3. Fungal structure of the tumor process (PAS, x40)

Figure 4. Clumps of basophilic filamentous Gram-positive bacteria, characteristic of Actinomyces infection (PAS, x40).
Tumoral cells are positive for CD20 (surface antigen of all stages of B cell and it is very useful to detecting conditions such as B-cell lymphomas and leukemia(6,7) (figure5)/ negative for CD3 (T-cell co-receptor is find to the film of all mature T-cells, and used to differentiate them from superficially B-cell and myeloid neoplasms(8) (figure6) and 55-60% of tumoral cells are positive for Ki67(mitotic index that is necessary for cellular proliferation)(9) (figure 7) (IHC staining).

The diagnosis was performed diffuse malignant lymphoma (B cell type) (figure8). Our patient was treated with Rituximab (anti CD20) (375 mg/m² or 1.83mg/kg IV over 3-8 hours, once weekly for 4-8 doses) and Doxorubicin HCl liposome (60-75 mg/m² or 1.83mg/kg IV over 1-3 hours, once every 21 days, for 6 steps), and Vincristine sulfate (1.4 mg/m² or 1.83mg/kg IV in combination with this drugs, every week) and then radiotherapy (25 steps, 5 times in a week). He had only lost 13 kg at the radiotherapy and he was suffering urinary tract infection and Aphthous stomatitis during chemotherapy. During this time, he received antibiotics (gentamycin, 3mg/kg/day IV/IM and Ciprofloxacin, 250mg/12hr PO) and prednisolone (20 mg orally per day, Maintenance dose). This disease lasted 8 months from diagnosis to treatment and after completion of study treatment, his entire body was re-examined for metastatic and lymph nodes involvement and he was followed for 2 years.
Cancers from Head & neck are the 6th most common in the entire world with more than 500,000 new cases by the year (1). Lymphoma, after squamous cell carcinoma and salivary gland cancers, is the 3rd common malignancy in the head & neck region (3-5% in the oral cavity) and it is uncommon and of the tongue even fewer (2). Head & neck lymphomas typically seem as an asymptomatic mass; nevertheless, they may be correlate with pain, fever, difficulty in speech, dysphagia and weight loss. These Symptoms are fewer in non-Hodgkin lymphoma compared with Hodgkin lymphoma. Oral bacteria and fungi could show a significant role in the creation of poor oral hygiene (3). These commensal floras may become pathogenic. Actinomyces are anaerobic gram-positive bacteria with branched rods that progress part of this flora and Actinomycosis in the base of the tongue is an uncommon form (only 3%)(4). Fungi cause severe problems in people with cancer and immunocompromised. According to reports, invasive fungal infections detected in 20-30% of patients with acute leukemia, 10-15% of patients with lymphoma, and 5% of patients with other malignancies (5).

Discussion

Due to the abating of the defense system in cancer patients, attention to opportunistic microorganisms, especially fungi, can help them to choose better treatment. Although, isolated lymphoma of the base of the tongue is extremely rare, it should always be considered in the differential diagnosis in with a sore throat. We recommended that clinicians send two specimens to the laboratory for better diagnosis of Actinomycoses and fungi structure, one for cultures in normal saline and the other for histopathology in formalin. Fungal culture from new samples and genotyping of microorganisms along with Immunohistologychemistry of biopsy can monitor treatment and clinical follow-up.

Conclusion

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