

Burkitt Type Lymphoma in Palatine Tonsil. A Report of A Case

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ABSTRACT

Burkitt's lymphoma (BL) is a subtype of non-Hodgkin's lymphoma considered one of the fastest-growing tumors. Due to its rarity in the adult patient, as well as its high aggressiveness, it is important to know how to diagnose it in time to improve the patient's prognosis and provide timely treatment. The aim of this paper is to present the clinical case of a young adult patient with Burkitt's lymphoma.

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INTRODUCTION

Lymphomas are a malignant lymphoproliferative disease which are classified into: Hodgkin's lymphoma (HL) and Non-Hodgkin's lymphoma (NHL).(1). Burkitt's lymphoma (BL) is within the group of NHL. It was first described in Africa by Dr. Denis Burkitt when he noticed that children from this continent had mandibular tumors defined as aggressive malignant neoplasms in the mandibular area.(2). Subsequently, in 2008, the World Health Organization (WHO), in its classification of lymphomas, included LB within the group of B-cell neoplasms (3).(3). This neoplasm is a highly malignant pathology, which has a rapid growth and dissemination, is subdivided into 3 subtypes: the endemic, which is mainly limited to equatorial Africa; the sporadic, which has a higher incidence in the United States and Western Europe, and the one associated with immunodeficiency(4). In this paper we focus on sporadic LB, specifically of the head and neck area. This subtype refers to cases with no specific geographic distribution worldwide, and represents 1-2% of adult lymphoma cases in the United States and Western Europe. It also occurs more frequently in males, with a 3 to 4:1 distribution, with a median age of 30 years.(4). This neoplasm commonly affects the lymph nodes and manifests as a mass enlargement. The extranodal structures of the head and neck most likely to be affected are those of Waldeyer's ring, which include palatine and lingual tonsils, as well as the adenoids in the nasopharynx(5). Due to the rapid growth of this tumor, the initial symptomatology is odynophagia or dysphagia and in a smaller proportion it manifests as pharyngeal globus, dysphonia and dyspnea. Also, they usually present osteolytic lesions with bone destruction and invasion of facial compartments in the area of the mandible and other bones in this area. (5) (6).

The diagnosis of this lymphoma must be made quickly as they tend to generate compression of vital structures of the head and neck, or early generalized dissemination. A biopsy of the lesion is required and the definitive diagnosis is based mainly on histology and immunohistochemistry. (2). At the same time, laboratory tests such as blood biometry, liver function tests, lactate dehydrogenase, uric acid should be requested. Also, the Human Immunodeficiency Virus (HIV) test is indicated because of the subtype that is related to this pathology. Because LB is associated with Epstein Barr Virus (EBV), it is convenient to perform the test as part of the patient's panel. (5)

For treatment, no clear initial therapy regimen has been defined due to the paucity of studies of this rare disease. Therapy that has shown excellent activity against LB is composed of doxorubicin, alkylating agents, vincristine and etoposide. However, the therapy proves to be toxic and results in significant myelosuppression as well as life-threatening complications (7)

Taking into account the seriousness of this pathology, the rapid tumor growth and its repercussions on the patient's well-being, as well as the importance of early diagnosis and treatment, this paper presents a rare case of intraoral sporadic Burkitt's lymphoma of the palatine tonsil in a 28-year-old male patient, with rapid tumor growth and deformation of the cavity, generating symptoms of respiratory distress.

CASE REPORT

28-year-old male from the State of Puebla, Mexico, sent from his family medicine unit to the emergency room. Admitted with the diagnosis of oral cavity abscess. No pathological personal history of importance. Non pathological personal history of smoking and positive alcoholism since he was 12

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years old. His current condition began one month before his admission with rapidly progressive growth of left palatine tonsil, odynophagia, progressive dysphagia to solids and liquids, two weeks later dyspnea of medium efforts was added. Weight loss of 9 kg in 1 month. She denies diaphoresis and fever. Physical examination showed hypernasal voice, oral cavity with tumor in left tonsil, pink, with necrosis area, firm, not mobile, that displaced uvula and contralateral tonsil occupying 80% of oropharynx. No adenomegaly or neck tumors were palpated.

A computed tomography (CT) scan of the neck was performed on the day of admission, which showed data suggestive of an abscess at the level of the left hemicollar with an approximate volume of 87.5 c.c., which caused significant compression and reduction of the airway (figure 1) (figure 2). Emergency tracheostomy and incisional biopsy of the left tonsil were performed (figure 3). Histopathological examinations of the biopsies led to the diagnosis of Burkitt

Lymphoma (figure 4), immunohistochemistry examination CD10, CD20, BCL6 positive and Ki67 98%. Viral panel studies, Hepatitis C and B non-reactive, HIV Western Blot negative, CD4 279 cells/mcg, CD8 228 cells/mcg, viral load for HIV not detected, EBV positive.

Twenty days after his admission, a CT scan of the neck, chest and abdomen was performed to evaluate metastasis data. The imaging study showed a pharyngeal tumor measuring 80x28x42mm, left renal lithiasis, with no evidence of metastatic activity at the level of the chest and abdomen.

The patient was referred to the Hematology Service, where he was evaluated and started treatment with cyclophosphamide, vincristine, doxorubicin, methotrexate (M - CODOX) in Hyper CVAD scheme, with good adherence to treatment, receiving 8 cycles in total. At his next evaluation visit, the service was notified by family members that the patient was infected with SARS - COV 2 and died from it.

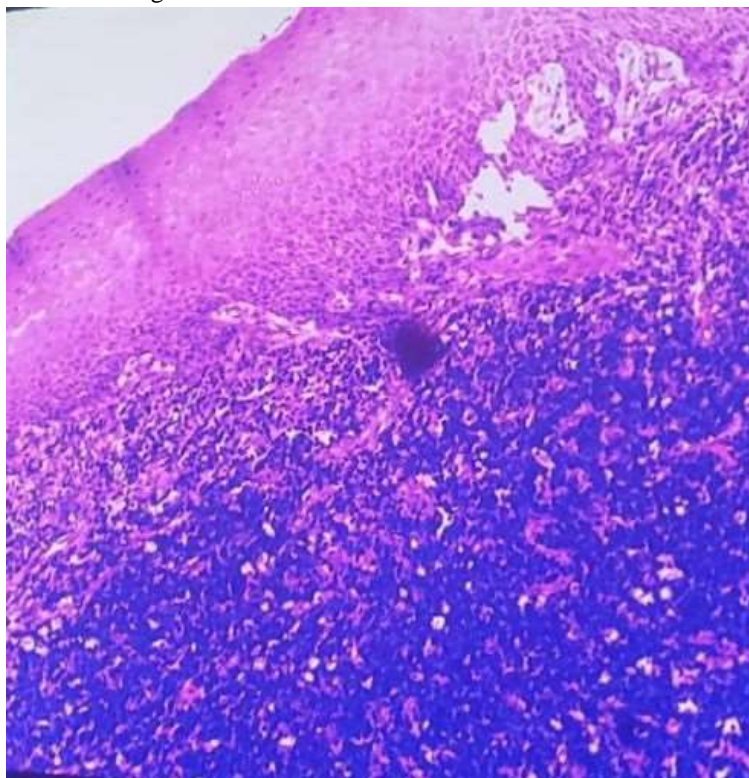


Figure 1. Tonsil section at low magnification showing flat stratified epithelium, non-keratinized and stroma with loss of normal architecture, given by diffuse infiltrate of atypical lymphoid cells and presence of irregular pale bodies.

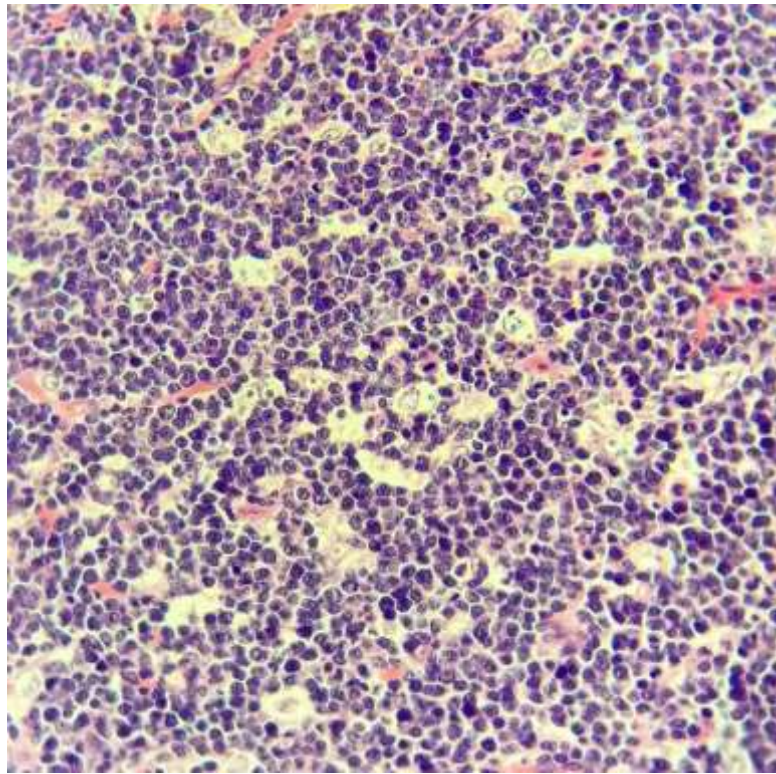


Figure 2. Higher magnification, the lymphoid infiltrate is atypical with more or less regular nuclei, presence of one or two nucleoli and increased mitotic index. The macrophage paleoid bodies are observed, with variable amount of cytoplasm which gives the characteristic "starry sky" image.



Figure 3. Large ulcerated tumor of infiltrative aspect of origin in the left tonsil that takes the soft palate and the posterior pharyngeal wall, reddish color, hard to palpation and easily bleeding.

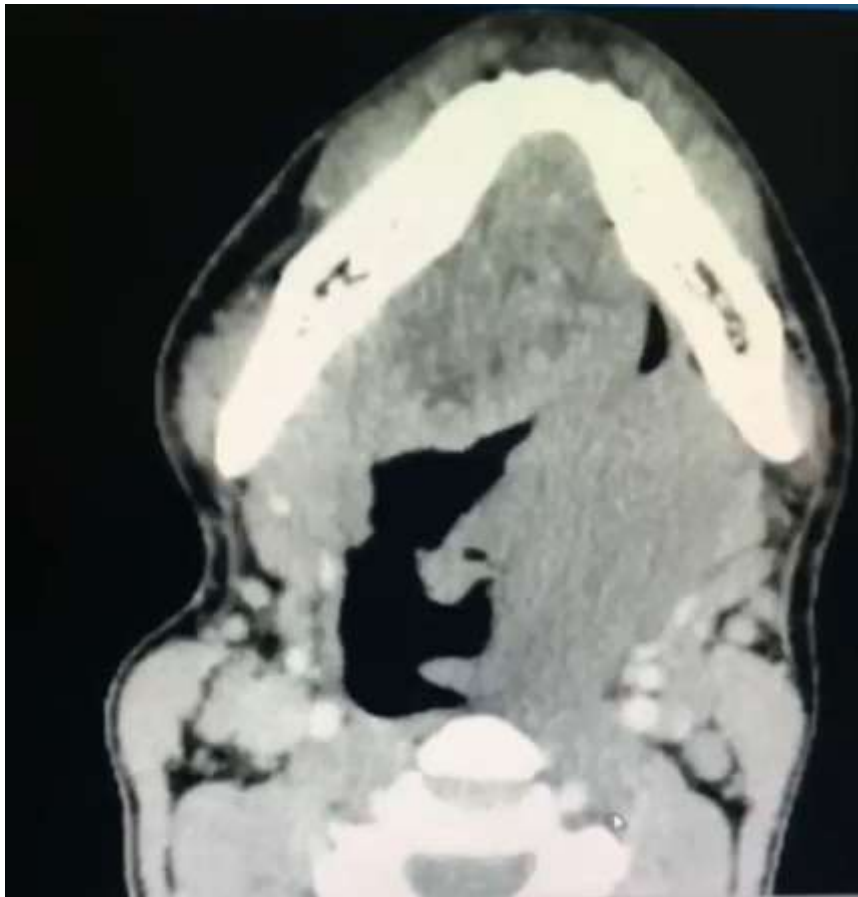


Figure 4. Contrast tomography in axial section shows a tumor located in the left lateral retropharyngeal and perivertebral space, which significantly displaces the airway.

DISCUSSION

Burkitt's lymphoma is a highly aggressive and fastest growing non-Hodgkin's B-cell neoplasm. It is one of the most common cancers in the pediatric population. (8)The sporadic type mainly affects older children with an average age of 12 to 14 years and young adults (9). (9)The sporadic type mainly affects older children with an average age of 12 to 14 years and young adults (9), comprising 30% of pediatric lymphoma cases in the United States and European countries. In turn, it accounts for <1% of NHL in the adult population, resulting in 3 cases per million. (4). In Mexico, in pediatric patients, BL represents about 11% of all lymphomas, approximately 1 - 2 cases for every 106 children with cancer.(10)

We present the case of a 28-year-old adult male patient with a diagnosis of Burkitt's lymphoma, sporadic type, located in the palatine tonsil. This type of lymphoma is uncommon in the adult population, and in this age group it rarely appears in the head and neck area, usually in the abdominal cavity, especially in the intestine. (5).

Because it is an extremely rare tumor, the patient was misdiagnosed as an oral cavity abscess. Often when LBs occur in the oral cavity, the symptoms become very subjective such as pain, swelling and dental and oral numbness, which could easily be attributed to a dental infection, also, when the tumor infiltrates dental support area, it generates mobility of structures, facial asymmetry and dental erosion. (11)This situation delays the diagnosis and

significantly impacts the patient's prognosis. However, what differentiates a dental pathology from a LB is the rapid growth and the continuation of the symptomatology after prolonged dental treatment.

If a malignant lesion of the oral cavity is suspected, an assessment and description of the cavity should be made, which should include mucosal changes, periodontal inflammation, bleeding and the general condition of the dental structures.

CONCLUSION

The LB in the oral cavity presents very non-specific symptomatology which can lead to misdiagnosis and delay in treatment. This situation can be complicated with serious events such as airway obstruction that can lead to death, so it is important to identify the data suggesting malignancy to initiate the study protocol to establish early diagnosis and immediate treatment of the pathology.

Likewise, we have not found any case reports in the literature that evaluate the clinicopathologic characteristics of sporadic LB in adults with tonsil involvement in the Mexican population, which is why the main objective of this work was to expose a rare case of LB, in order to create a bibliographic background as a reference for future cases and to follow this line of research.

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