Case Report

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Neck mass in a young adult – an atypical case of lymphoma solved with surgery

Abstract

Nodular lymphocyte-predominant lymphoblast (LHNPL) is an uncommon subtype of Hodgkin's lymphoma (LH).

Compared to other kinds of LH, it is more confined and indolent. We aim to raise awareness about lymphoma as a potential cause of cervical masses in young people by presenting this clinical case, which is an unusual instance of LHNPL that was cured with excisional biopsy. A literature review and a descriptive and retrospective clinical case study were performed. We discuss the case of a 23-year-old who has had a left submaxillary adenopathy for nearly 7 years, with inconsistent behavior. We performed three fine needle aspiration cytology (FNAC) and found changes indicative of reactive ganglia. The final diagnosis of LHNPL was obtained using excisional biopsy. Because the patient had no signs of systemic and local involvement, it was decided not to do additional therapy, with no complaints at almost 5-year follow-up. In the differential diagnosis of cervical malignancies in young adults, lymphoma must be taken into account. In this case, both the diagnosis and treatment were surgical. We alert to LHNPL because the typical clinical presentation is cervical lymphadenopathy (100%), with no additional signs or symptoms in most patients.

Keywords: neck mass, surgery, lymphoma, young adult, case report

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Main points

In any case of neck mass, neoplastic causes should be considered. The medical approach to treating lymphoma does not typically include surgery. LHNPL is a subtype of Hodgkin's lymphoma that's more indolent and restricted

Surgery was the primary diagnostic and, surprisingly, the only therapeutic step in this lymphoma patient.

Introduction

In children and young adults, neck masses are typically classified as either developing or inflammatory. Nevertheless, neoplastic causes must be considered. About 5% of all cases of Hodgkin's lymphoma (LH) are nodular lymphocyte-predominant LH (LHNPL).[1] It is more indolent and confined than other kinds of LH (classical LH), with distinct clinical and histological characteristics, requiring its own management. Because it occurs seldom, the literature has low-quality information.

With this clinical case, we want to alert to lymphoma as an important cause of cervical mass in young adults, reporting an atypical case LHNPL resolved by excisional biopsy. This case report was written according to the CARE criteria.[2]

Clinical case

We discuss the case of a 23-year-old who has had a left submaxillary adenopathy for approximately 7 years and has no relevant past medical history. A overview of the most important data is given in Table 1. The neck mass fluctuated in response to upper respiratory tract infections, but the patient did not exhibit odynophagia, otalgia, dysphonia, dysphagia, fever, weight loss, or sweating. Physical examination it was movable, soft, and painless (Figure 1).

The neck computed tomography (CT) scan revealed a 37-mm-long lymphadenopathy in the left submaxillary area, as well as compression of the ipsilateral submaxillary gland. Multiple adenopathies were observed in levels I, II, and III of the ipsilateral neck, together with hypertrophy of Waldeyer's ring lymphoid structures (Figure 2).

Table 1 Timeline.

Date	Summary from visits	Diagnostic testing	Interventions
December 2018	Single neck mass	FNAC: Reactive ganglia	
May 2019	Single neck mass	FNAC: Reactive ganglia	
November 2019	Single neck mass	FNAC + CT Scan	
December 2019			Surgery: excisional biopsy

FNAC, fine needle aspiration cytology; CT, computed tomography

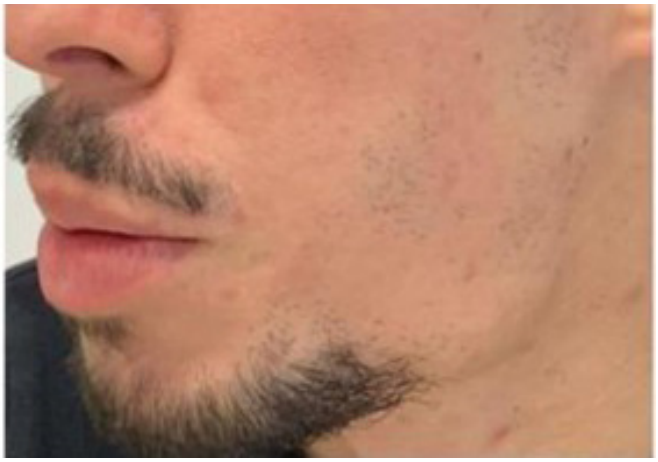

Figure 1 Lymphadenopathy in the left submaxillary area.

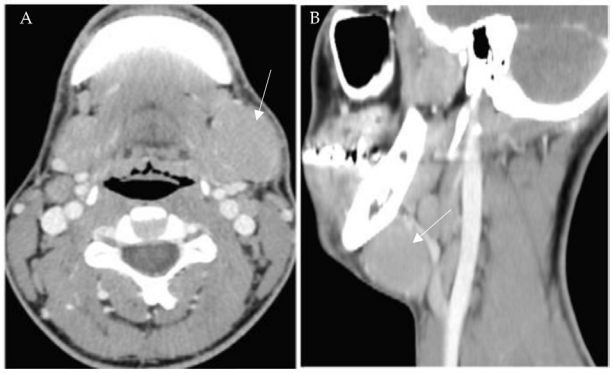

Figure 2 Neck CT scan. A) axial view; B) Sagittal view. Arrow pointing to the mass.

We performed three FNAC and found changes indicative of reactive ganglia. Excisional biopsy was used to diagnose LHNPL following a mass growth in the previous year (Figure 3). Since there was no evidence of systemic or local involvement, the lymphoma tumor board opted not to proceed with further treatment.

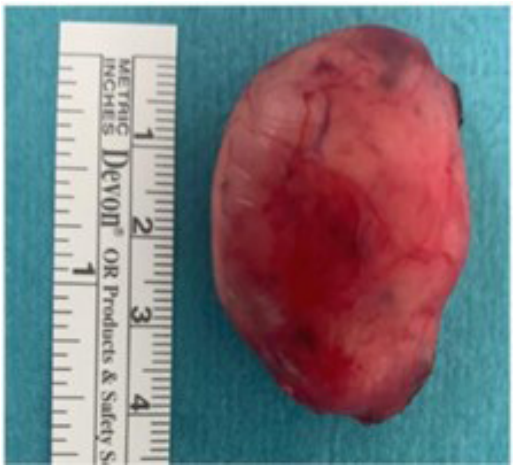

Figure 3 Adenopathy after removal.

After nearly 5 years of follow-up, there have been no complaints or evidence of relapse.

Discussion

Understanding the differential diagnosis of neck masses is crucial for otolaryngologists. Frequently, it is the only indication for individuals with head and neck cancer. In children and young adults, neck masses are typically classified as either developing or inflammatory/reactive. Nevertheless, neoplastic causes must always be considered. Out of the approximately 800 lymph nodes in the entire lymphoreticular system, there are about 300 lymph nodes in the head and neck area. Thus, it is not unexpected that lymphoma may manifest in the neck and that a head and neck expert plays a crucial role in its identification.[3]

Lymphoma accounts for roughly 5% of head and neck malignancy.[4] HL and non-Hodgkin lymphoma (NHL) are the two primary forms of lymphoma. However, there are many different subtypes, cells of origin (B and T cells), and other factors to consider.[1] Classic HL disease has a bimodal age distribution, with peaks in those aged 20–30 years and 70–85 years.[5-7] LHNPL is a rare subtype of LH, accounting for around 5% of total LH.[1] It is more indolent and confined than other kinds of LH (classical LH), requiring its own management.

Unknown causes have been linked to a rise in the occurrence of LHNPL in youngsters, with almost 75% of cases being male,[8] including our patient. Lymphadenopathy is the clinical presentation in 100% of cases, and it typically presents as chronic and asymptomatic.[9,10] At presentation, B symptoms are only present in up to 15% of individuals.[11]. Other organ involvement is rare. Because Waldeyer's ring hypertrophy is the most prevalent extranodal site for HL presentation in the head and neck (accounting for more than 50% of cases),[12] it could provide a clue for the diagnosis in our patient prior to surgery, as stated above in the CT scan.

The challenging differential diagnosis is made between benign and malignant causes of lymphadenopathy, necessitating a thorough pathological examination.[13] Lympho-histiocytic malignant cells can be distinguished from other traditional LH subtypes based on their immunophenotype.[13] The Ann Arbor staging approach with Cotswolds changes is used, as it does for patients with typical HL.[14,15] Most patients (75%) are at stage I/II of the illness, and bone marrow involvement is uncommon at this point.[13]

With the option of adding anti-CD20 immunotherapy, the treatment seeks to limit the long-term damage of chemotherapy and systemic radiation, considering the patient's fair prognosis and indolent behavior. The best course of treatment has not been determined by consensus or randomized clinical trials.[16] Studies conducted in the past show that active surveillance has a long-term survival rate that is similar to other therapies with few side effects.[16] This was the strategy used in the case that was discussed; as there was no systemic or local involvement, excisional biopsy was followed by no further therapy.

Conclusion

It is crucial to consider lymphoma as a possibility when making a differential diagnosis for a cervical tumor in a young adult. Since cervical lymphadenopathy is present in almost all instances (100%) and there are typically no other indications or symptoms, we raise awareness of LHNPL. Since surgery was the only therapeutic option done in this case for controlling the lymphoma, and it seems to be working, this case has taken an interesting turn.

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Declarations

Institutional review board statement: The study was conducted in accordance with the Declaration of Helsinki and approved by the Ethics Committee of the hospital.

Informed consent statement: Informed consent was obtained from all subjects involved in the study. Written informed consent has been obtained from the patient to publish this paper.

Data availability statement: No new data were created or analyzed in this study. All relevant data are contained within the article.

Conflicts of interest: The authors declare that there are no conflicts of interest

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