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(CASE REPORT)

Febrile nasal obstruction: What is your diagnosis?

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Abstract

Extranodal nasal-type NK/T-cell lymphoma is a rare and aggressive malignancy, usually reported in East Asian populations. Its initial presentation may mimic chronic infection or necrotizing vasculitis, leading to diagnostic delay and therapeutic errors.

We report the case of a 63-year-old man with no significant medical history who presented with febrile bilateral nasal obstruction evolving for one month, associated with palatal ulceration and facial edema. Computed tomography revealed extensive inflammatory sinus involvement without bone destruction. The first biopsy suggested Wegener's granulomatosis, but antineutrophil cytoplasmic antibodies (ANCA) were negative. Immunohistochemistry subsequently confirmed an extranodal NK/T-cell lymphoma of nasal type.

Necrotizing sinonasal lesions resistant to antibiotic therapy should raise suspicion of NK/T-cell lymphoma, even in non-endemic regions. Early histopathological and immunohistochemical confirmation is crucial for appropriate management and improved prognosis

Keywords: TNK lymphoma; Nasal Lymphoma; Case Report; Nasal Ulceration; EBV infection

1. Introduction

Extranodal NK/T-cell lymphoma of the nasal cavity is a rare and aggressive form of non-Hodgkin lymphoma, characterized by angiocentric and necrotizing growth patterns [1]. It predominantly affects men in middle age and often presents with destructive lesions of the midface, mimicking chronic infection or granulomatous disease [2]. Although this malignancy is more frequent in Asian and Latin American populations, sporadic cases have been reported in North Africa, including Morocco and Tunisia [3]. Deep biopsy with immunohistochemical analysis remains essential for an accurate diagnosis. We report a Moroccan case of nasal NK/T-cell lymphoma initially mistaken for necrotizing bacterial infection, highlighting the diagnostic challenges and the importance of considering this entity in aggressive sinonasal lesions.

2. Case presentation

A 63-year-old Moroccan man, non-smoker, with no significant past medical history, presented with progressive bilateral nasal obstruction evolving for one month, without rhinorrhea or loss of smell. The initial examination revealed a polypoid mass in both nasal cavities (Figure 1). He underwent surgical excision of the mass in a private setting, but the histopathology report was unavailable.

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Figure 1 Appearance of the skin on admission

One month later, the patient presented to our department with febrile nasal obstruction and facial swelling. Rhinological and facial examination revealed a bilateral nasal mass associated with purulent rhinorrhea, which prevented nasal endoscopy, along with erythema of the nasal pyramid and maxillary region, and bilateral palpebral edema (Figure 2), (Figure3)

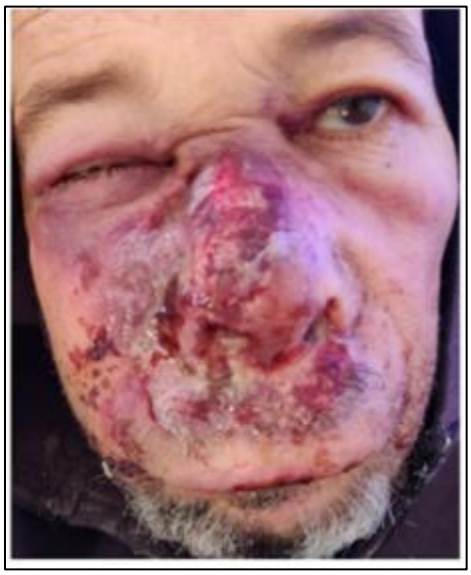

Figure 2 Appearance of the skin after two weeks showing the deterioration of the patient skin lesions

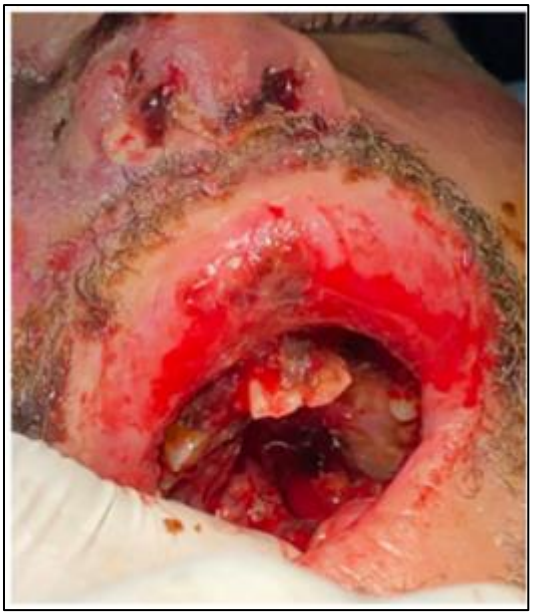

Figure 3 Ulceration of the soft palate, mouth opening limitation after two weeks

The patient was started on empirical antibiotic therapy after bacteriological sampling. Two weeks later, because of clinical deterioration with extension of cutaneous lesions and the onset of new symptoms—palatal ulceration, trismus, dyspnea, and dysphagia the antibiotic regimen was modified on suspicion of a nosocomial infection.

A computed tomography (CT) scan of the head showed soft-tissue masses occupying both nasal and paranasal cavities, with subcutaneous infiltration of the palpebral and maxillary regions, as well as thickening of the nasopharynx and oropharynx. No bone lysis was observed. A skin biopsy was performed concurrently (Figure 4), (Figure 5), (Figure 6). Histopathological analysis suggested granulomatosis with polyangiitis (Wegener's disease), but cytoplasmic antineutrophil cytoplasmic antibodies (c-ANCA) were negative. Immunohistochemistry confirmed an unclassifiable NK/T-cell lymphoma of nasal type.

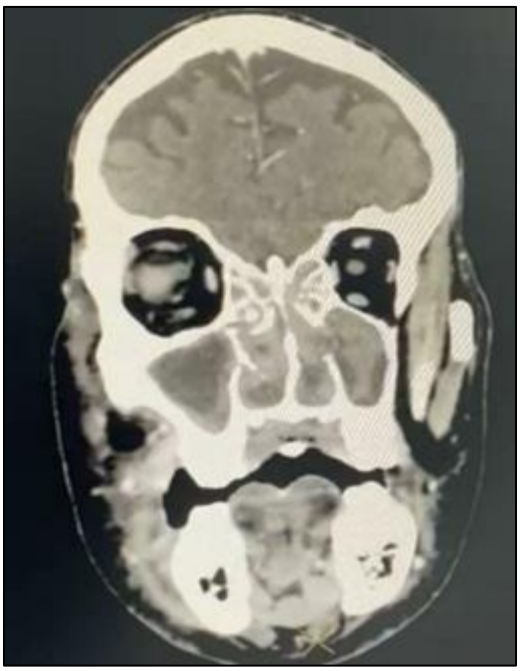

Figure 4 Coronal CT scann of the face passing by the nasosinus cavities

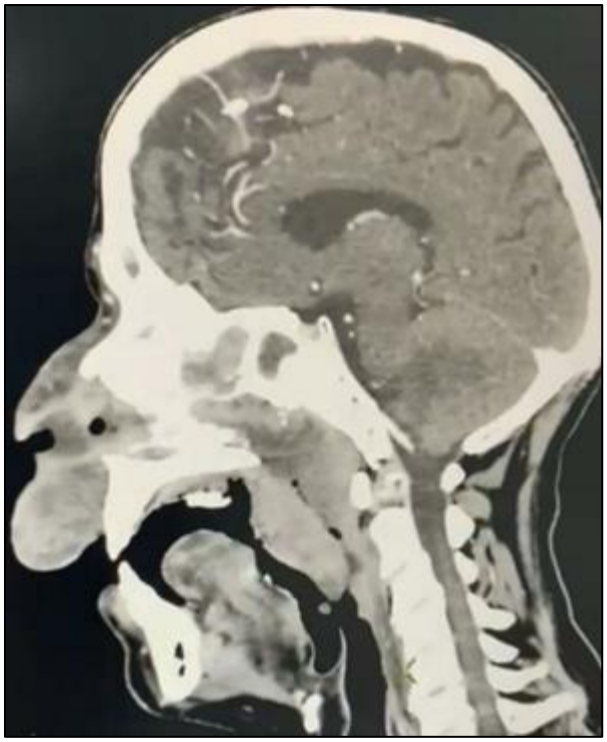

Figure 5 Sagital CT scann of the face passing by the oro and hypopharynx

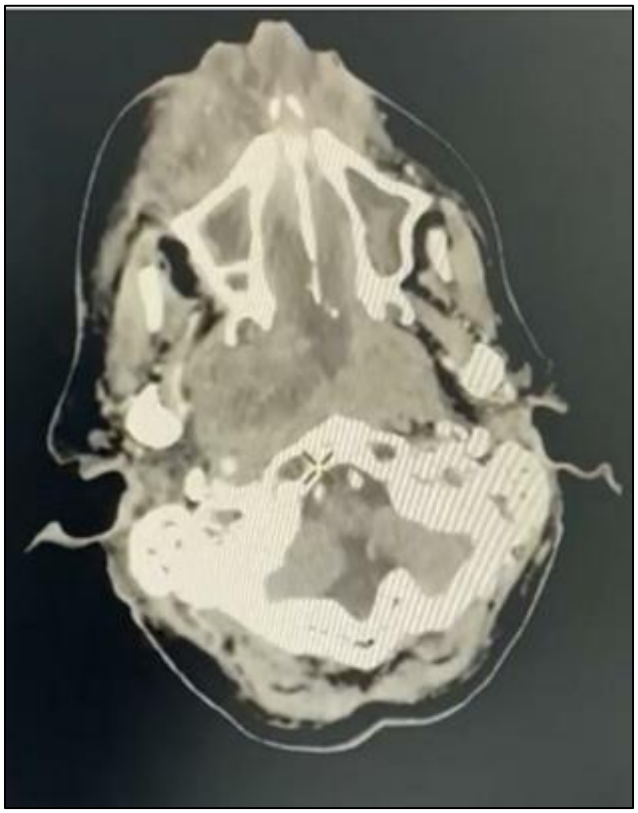

Figure 6 Axial CT scann of the face passing by the nasosinus cavities and nasopharynx

The patient was referred to the oncology department for multidisciplinary management, but was subsequently lost to follow-up.

3. Discussion

Sinonasal NK/T-cell lymphomas remain uncommon malignancies, reported mainly in Asian and Latin-American populations, while cases from North Africa are exceptional and their true frequency in Morocco remains undetermined [1].

This entity represents nearly half of all primary nasal lymphomas [2]. It usually affects middle-aged adults, with a clear male predominance ranging from two- to fourfold according to published series [3, 4].

The exact pathogenesis is still uncertain. Current data suggest a multifactorial process combining genetic alterations—particularly p53 or c-kit mutations [4] and a strong association with latent Epstein–Barr virus infection [1, 4].

Clinically, the disease often begins with ulcerative or necrotic lesions of the nasal cavity and paranasal sinuses, observed in nearly 70 % of cases. In advanced stages, extension to the Waldeyer's ring, oral cavity, larynx, or hypopharynx may occur [5]. Patients typically present with nonspecific sinonasal complaints such as obstruction, discharge, or epistaxis, and endoscopic evaluation may reveal friable or perforated mucosa. In severe forms, progressive destruction of the nasal pyramid may develop.

Cross-sectional imaging, especially CT and MRI, is crucial to assess local extension and bone integrity and to differentiate neoplastic from inflammatory lesions. In our patient, the absence of bone destruction despite extensive necrosis highlights the variability of radiologic presentation in NK/T-cell lymphoma and the risk of diagnostic delay.

Histopathological examination generally demonstrates lymphoid cell infiltration, whereas immunohistochemistry confirms the T-cell/NK-cell phenotype through expression of specific markers.

Management remains complex and stage-dependent. Combined-modality therapy integrating radiotherapy and chemotherapy provides the best outcomes. For limited-stage disease (I–II), conventional external radiotherapy around 50 Gy achieves remission in up to 80 % of patients, with five-year survival rates between 40 % and 60 % [6]. For advanced stages (≥ IIE or B), concurrent radio-chemotherapy improves control and survival [7]. According to Mikhaeels and Spittle, intensive chemotherapy may be warranted even in localized forms, given the intrinsic aggressiveness of this lymphoma [8].

Despite therapeutic advances, overall prognosis remains poor, with five-year survival seldom exceeding 50 % [3].

In summary, our observation underlines that in non-endemic regions such as Morocco, nasal NK/T-cell lymphoma may mimic necrotizing infectious or granulomatous lesions, delaying the diagnosis. Early histopathological confirmation with immunohistochemistry is essential for accurate identification and timely multidisciplinary management.

4. Conclusion

Nasal NK/T-cell lymphoma should be considered in the differential diagnosis of necrotizing sinonasal lesions that fail to respond to antibiotic therapy, even in non-endemic regions. Early deep biopsy and immunohistochemical analysis are essential for accurate diagnosis. Timely multidisciplinary management remains the key to improving survival in this aggressive disease.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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