

# Nasal-type extranodal NK/T-cell lymphoma: a diagnostic challenge

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Accepted 9 January 2021

## DESCRIPTION

A 72-year-old man presented to the emergency department with a 3-week history of fatigue, weight loss, night sweats, fever and severe nasal obstruction with nasal discharge. Being possible symptoms of COVID-19 infection, its presence led to the required exclusion of the disease, so he underwent a SARS-CoV-2 RT-PCR test, which revealed to be negative. He was discharged with paracetamol 1g every 8 hours and nasal irrigation with saline solution for a common cold.

He returned to the emergency department 3 days later, reporting the emergence of skin lesions on both legs, which were rapidly evolving in size and extent. On examination by an otolaryngologist, a granulomatous lesion with irregular mucosa and oedema on the anterior portion of the left nasal cavity was identified (figure 1A). He was also presented multiple firm and dark purple patches with some subcutaneous nodules on both legs (figure 1B), which were painless on palpation, and had a vasculitic appearance. He had no nasal, orbital or other facial deformities.

Laboratory studies revealed a white cell count of  $15 \times 10^9/L$ <sup>3</sup>, and a C reactive protein of 15.33 mg/dL, with no other significant findings.

CT scan images revealed a neoplastic lesion occupying the anterior portion of the left nasal cavity with  $1 \times 1.4$  cm, showing heterogeneous contrast uptake, and conditioning right septum deviation and total obliteration of the anterior left nasal cavity (figure 2).

Two biopsies were performed: one on the left nasal lesion and another on the skin lesions. The histology examination revealed the presence of heterogeneous size cells, with irregular nucleus and sparse cytoplasm, with multiple mitotic and apoptotic figures, as well as mild angiodestruction. These features were compatible with the diagnosis of lymphoma, and the immunohistochemistry analysis made the diagnosis of a primary extranodal natural killer (NK)/T-cell lymphoma (ENNKTL), nasal type, showing the typical immunophenotype of CD56+, CD2+ and cytoplasmic CD3+. The proliferation index of Ki67 was 10%. Chromogenic in situ hybridization (CISH) staining for Epstein-Barr virus (EBV)-encoded RNA transcript was positive.

The patient started chemoradiation therapy, but unfortunately died after 2 weeks.

ENNKTL, nasal type, also known as lethal midline granuloma, is an Epstein-Barr virus-associated lymphoma, and represents about 0.44% of the extranodal sinonasal lymphomas.<sup>1 2</sup>



**Figure 1** (A) Anterior rhinoscopy showing the nasal lesion on the left nasal cavity. (B) Skin lesions on both legs.

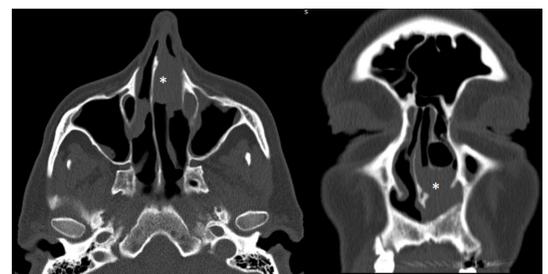
The nose is the most common initial involved site, and can manifest as an intranasal lesion conditioning obstructive symptoms, with bleeding and purulent nasal discharge.<sup>3</sup> Commonly it manifests with unspecific symptoms of rhinitis or sinusitis, making a malignant diagnosis difficult to suspect.

The skin is the primary site where ENNKTL spreads to, being the emergence of firm, multiple and dark purple subcutaneous nodules the most frequent cutaneous finding, as in the presented case.<sup>4</sup> This is probably due to its angiocentric and angioinvasive nature, which is responsible for the blood vessel wall destruction.

ENNKTL is a rare disease, with a recognised poor prognosis, due to its invasive and aggressive behaviour, as well as its lack of response to chemotherapy and radiotherapy regimens.<sup>5-7</sup>

As the primary manifestations of COVID-19 consist of respiratory symptoms,<sup>8 9</sup> it is understandable that the case described has first been approached as a highly suspect case. The refractory behaviour of its symptoms to the implemented treatments raised an alert.

In this challenging time, it can become difficult to divert attention from a possible COVID-19 diagnosis in the presence of a typical clinic, but trying to decrease the misdiagnosis of other treatable entities is of paramount importance.



**Figure 2** CT images revealing a space-occupying lesion on the anterior portion of the left nasal cavity (\*).



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**To cite:** Gama R, Sousa M, Castro F, et al. *BMJ Case Rep* 2021;**14**:e241500. doi:10.1136/bcr-2020-241500

## Learning points

- ▶ The extranodal natural killer/T-cell lymphoma, nasal type, commonly manifests with unspecific symptoms of rhinitis or sinusitis, making a malignant diagnosis difficult to suspect.
- ▶ We aim to raise the alert between Ear, Nose and Throat (ENT) residents and family doctors to the possibility of such an unsuspected nasal and systemic clinic could represent this very uncommon malignant.
- ▶ One of the most important and dangerous consequences of the SARS-CoV-2 pandemic could be the higher missed screening and diagnosis of other diseases, as both the clinicians and the patients themselves are focused on suspected or confirmed COVID-19.

We aim to describe a case of ENNKTL with both nasal and cutaneous features, so that an alert can be raised between physicians of all specialties, and so the inclusion of this entity in the differential diagnosis of such a combination of manifestations can be made.

**Contributors** RG wrote the paper and collected the data. MS corrected the paper; diagnosis. CF and AC revised and corrected the paper.

**Funding** The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

**Competing interests** None declared.

**Patient consent for publication** Obtained.

**Provenance and peer review** Not commissioned; externally peer reviewed.

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