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## CASE REPORT

# A case of mucosal leishmaniasis: Mimicking intranasal tumor with perforation of septum



Hanefi Cem Gul <sup>a,\*</sup>, Fuat Tosun <sup>b</sup>, Ahmet Karakas <sup>a</sup>, Ozgur Koru <sup>c</sup>, Onder Onguru <sup>d</sup>, Gurkan Mert <sup>a</sup>, Bulent Ahmet Besirbellioglu <sup>a</sup>, Can Polat Eyigun <sup>a</sup>

<sup>a</sup> Department of Infectious Diseases and Clinical Microbiology, Gulhane Military Medical Academy and School of Medicine, Etlik, Ankara, Turkey

<sup>b</sup> Department of Otolaryngology, Gulhane Military Medical Academy and School of Medicine, Etlik, Ankara, Turkey

<sup>c</sup> Department of Microbiology, Gulhane Military Medical Academy and School of Medicine, Etlik, Ankara, Turkey

<sup>d</sup> Department of Pathology, Gulhane Military Medical Academy and School of Medicine, Etlik, Ankara, Turkey

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### KEYWORDS

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A 79-year-old male suffering from nasal congestion was referred to our hospital. Endoscopic examination revealed a hyperemic mass obstructing the left nasal passage. The lesion's surface was smooth. The findings of imaging studies were consistent with a benign tumor despite the erosion and perforation of the septum. The lesion originated from the middle concha and was attached to it with a thin stalk. It was removed easily by endoscopic resection. Histopathology revealed significant infiltration of mononuclear inflammatory cells, mostly lymphocytes and histiocytes, into the edematous subepithelial connective tissue. High-power magnification showed numerous *Leishmania* amastigotes in the cytoplasm of the histiocytes. A polymerase chain reaction experiment for *Leishmania* also confirmed the morphological diagnosis. No relapse was observed in the 12 months after surgery and the patient was doing well.

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\* Corresponding author. Department of Infectious Diseases and Clinical Microbiology, Gulhane Military Medical Academy and School of Medicine, 06018 Etlik, Ankara, Turkey.

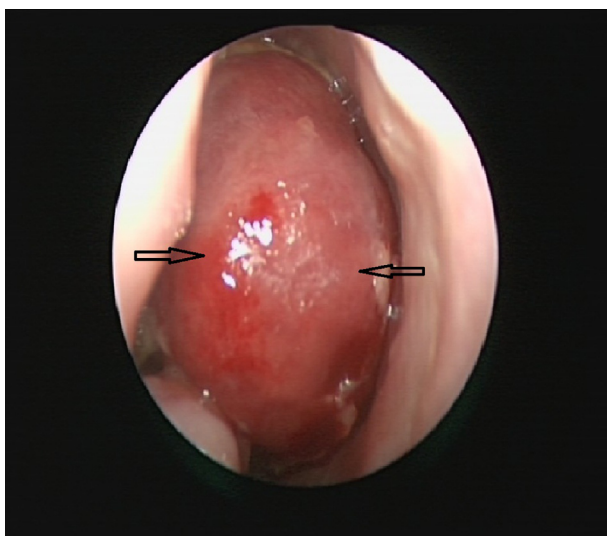
E-mail address: [hcgul@yahoo.com](mailto:hcgul@yahoo.com) (H.C. Gul).

## Introduction

Leishmaniasis is a protozoal disease that is encountered in many countries and is caused by parasites belonging to the genus *Leishmania*. The prevalence of leishmaniasis has been estimated to be 12 million cases worldwide, and 1–1.5 million new cases are being reported each year.<sup>1</sup> *Leishmania* parasites, the causative agents of the disease, are transmitted through the bites of the flies that are known as *Phlebotomus* spp. in the Old World and as *Lutzomyia* spp. in the New World.<sup>2</sup> In humans, leishmaniasis occurs in three major clinical forms: cutaneous leishmaniasis (CL), mucosal leishmaniasis (ML), and visceral leishmaniasis.<sup>3</sup> Nearly 90% of cases of visceral leishmaniasis are reported from the Indian subcontinent and Sudan.<sup>4</sup> Although CL is especially frequent in the Mediterranean countries, including Turkey, ML is more frequent in South America.<sup>5,6</sup> Herein, we present an interesting case of ML, which caused airway passage obliteration and nasal septum perforation, mimicking a neoplastic process.

## Case report

A 79-year-old male who had been suffering from nasal congestion was referred to our institution, Gulhane Military Medical Academy and School of Medicine, and evaluated in the outpatient service center of the ENT department. The physical examination was otherwise normal, except for a mass lesion in the left nasal passage. An endoscopic examination was performed; the results demonstrated the lesion as a smooth-surfaced, hyperemic mass, filling the entire left nasal passage and even causing erosion as well as perforation in the posterior half of the nasal septum (Fig. 1). A complete blood count, routine biochemical tests, erythrocyte sedimentation rate, and protein electrophoresis were performed, the results of all of which were



**Figure 1.** Endoscopic view of a hyperemic mass completely filling the left nasal passage and perforating the septum (arrows).

normal. Chest X-ray and abdominal ultrasonography were unremarkable. Serological tests, namely, Hepatitis B surface antigen (HBsAg), Hepatitis C antibody (Anti-HCV), and Human immunodeficiency virus antibody (Anti-HIV), were all negative. A paranasal sinus computed tomography was carried out in order to elucidate the characteristics of the mass further. It confirmed that the mass lesion was filling the left-side airway completely. Perforation of the septum was also demonstrated clearly on the computed tomography scan. At the perforation site, the lesion was penetrating the septum and extending to the right nasal passage (Fig. 2).

The tumoral mass was attached to the left middle concha with a thin stalk and was removed easily by endoscopic resection. No remnant of the lesion was found after surgical removal (Fig. 3).

The histopathological examination, however, surprisingly revealed that the lesion was inflammatory in nature, characterized by heavy infiltration of mononuclear cells such as lymphocytes and numerous histiocytes. Giemsa stain highlighted innumerable Leishman–Donovan bodies within the histiocyte cytoplasm (Fig. 4).

Using a generic primer pair LGITSF2/LGITR2 which was based on the sequences of the rRNA internal transcribed spacer 2 (ITS2) region of multiple *Leishmania* species, as previously described,<sup>7</sup> were detected *Leishmania* species in the nasal lesion (Fig. 5). A SYBR green-based real-time polymerase chain reaction (PCR) assay under development was used for categorization of the *Leishmania* spp. into six different groups (unpublished data). Using this SYBR green assay, the DNA sample extracted from the nasal tissue was found to be positive for *Leishmania donovani* complex.

## Discussion

In the Mediterranean basin where Turkey is located and in the rest of the Middle East, CL is endemic. While CL is most commonly seen in the south-eastern Anatolian region, some sporadic cases are also being reported from other regions.<sup>6</sup> Between 1991 and 2003, a total of about 26,000 CL cases, most of them being from the province of Sanliurfa, was reported.<sup>8</sup> Studies have shown that the most commonly seen subspecies is *Leishmania tropica*. The other subtypes, such as *Leishmania infantum*, have rarely been reported.<sup>9</sup> The mucosal manifestation (ML), although well known in the New World, has occasionally been reported in the Old World. While in the New World ML cases, the nose is the most frequently affected area, other locations such as buccal, pharyngeal, or laryngeal regions have been described to be affected predominantly in the Mediterranean ML cases. Mucosal involvement probably results from a hematogenous or lymphatic spread from cutaneous lesions.<sup>1,10</sup>

The present case was a 70-year-old man; his physical examination and laboratory investigations revealed no other pathology than the nasal mass. The patient was regarded immunocompetent, and no skin lesions of leishmaniasis were detected. The clinical history of patient was unremarkable about any similar experience in the head and neck region. Owing to the lack of a history of any pre-

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