Mucosal Leishmaniasis of the Nasal Cavity: Case Report and Review of Literature

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ABSTRACT

Objective: To report a case of mucosal leishmaniasis in the nasal cavity and review the literature on diagnosis and management.

Introduction: Leishmaniasis is a disease caused by protozoan parasites of the genus Leishmania. The disease can manifest as cutaneous, mucosal and visceral lesions. The mucosal form is the least common, likely resulting from hematogenous or lymphatic dissemination from cutaneous lesions to regions of the upper aerodigestive tract. This entity is associated with significant morbidity and remains largely endemic to Central and South America, outside of these regions, it is almost exclusively seen in individuals having recently returned from travel. Economic globalization and international travel have increased the prevalence of Leishmaniasis in developed countries, including the US and, as such, it is incumbent upon the otorhinolaryngologist to be familiar with such pathology so as to facilitate prompt diagnosis and treatment.

Method: We describe a case of mucocutaneous leishmaniasis involving the right caudal septum and nasal cavity in a 39-year-old male who presented with progressive unilateral nasal congestion and intermittent epistaxis. The patient had been diagnosed with cutaneous leishmaniasis 10 months prior after vacationing in Peru. Rhinoscopy showed a discrete region of friable, nodular-appearing mucosa over the right caudal septum and anterior face of the inferior turbinate. Diagnosis was confirmed from mucosal biopsy via polymerase chain reaction.

Results: Six months after completion of a four-week treatment course with pentavalent antimonials, symptoms gradually resolved and rhinoscopic exam improved.

Conclusions: Mucocutaneous leishmaniasis is a treatable disease; however, it must be recognized and treated appropriately. Given its presentation in the upper airway, otolaryngologists must keep it on the differential diagnosis particularly in individuals who have risk factors. Moreover, given the possibility for recurrence, patients must be monitored following completion of treatment.

INTRODUCTION

Leishmaniasis is a group of diseases caused by protozoan parasites of the genus Leishmania. As a disease that is endemic in 88 countries including Central and South America, its prevalence, even in developed countries, has continued to rise secondary to economic globalization, human migration, and increased international travel. Its incidence has also increased as there has been a growing population of patients with immunosuppression related to chronic disease, neoplastic processes, transplant, and HIV. The disease can manifest as cutaneous, mucosal, and visceral lesions. Cutaneous leishmaniasis is the least severe form of the disease and presents as a single nodular or ulcerative lesion at the site where the patient is first inoculated by an infected female sand fly. The mucosal form of the disease most commonly results from the hematogenous or lymphatic dissemination from cutaneous lesions to regions of the upper aerodigestive tract as described in this case report; however, it can also occur as the primary site of disease. Historically, mucosal involvement is relatively uncommon and has only been reported to occur in 5% of patients with cutaneous leishmaniasis. Of note, in over 90% of mucosal lesions, it is the nasal cavity that is the only site affected.

To confirm diagnosis, biopsy, smear, or aspirate must be obtained according to CDC guidelines and regulations.

Mucocutaneous leishmaniasis is most commonly treated with pentavalent antimonials. However, amphotericin and pentamidine are also in use. More recently, attention has been directed towards the search of an oral medication to minimize injection-associated complications.

CASE REPORT

A 39-year-old otherwise healthy male initially presented to a dermatologist with an ulcerating lesion of his left lower extremity. He had sustained a sand fly bite to that leg while he was in the Amazon. A few months later the patient developed a lesion that gradually began to ulcerate (Figure 1). His initial treatments with antibiotics were unsuccessful and ultimately led to his presentation at the dermatology clinic. A skin biopsy was performed and returned positive for *leishmaniasis braziliensis*.

The patient was then referred to infectious disease and was electively admitted to begin treatment with sodium stibogluconate. The inpatient otolaryngology service was consulted at the time of admission to evaluate for mucocutaneous leishmaniasis of the nasal cavity when he described several weeks of unilateral right-sided nasal congestion and intermittent epistaxis.

Rhinoscopy showed a discrete region of friable, nodular-appearing mucosa over the right caudal septum and anterior face of the inferior turbinate (Figure 2). Diagnosis was confirmed from mucosal biopsy via polymerase chain reaction (PCR).

After discharge from the hospital the patient completed a four-week course of pentavalent antimonials with resolution of symptoms and improvement of exam (Figure 3). Patient will require follow up for at least two years in infectious disease and otolaryngology clinics for surveillance, although length of time has yet to be determined.

PRE-TREATMENT

Figure 1. Left lower extremity lesion, biopsy positive for *leishmaniasis braziliensis* before treatment.

Figure 2. Pre-treatment images of the right nasal cavity showing nodular-appearing mucosa both along the septum and on the inferior turbinate.

POST-TREATMENT

Figure 3. Post-treatment images of the right nasal cavity showing good response to the therapy and healthy, pink mucosa.

DISCUSSION AND CONCLUSIONS

Mucosal leishmaniasis can be treated with complete resolution of symptoms after a 4-week course of pentavalent antimonials. A few case reports discuss cases of primary mucosal leishmaniasis in which leishmaniasis was not included in the initial differential diagnosis. Another discusses a patient who relapsed several years after initial presentation and treatment.

Leishmaniasis should be high on the differential in patients with appropriate risk factors including travel to endemic regions and immunosuppression. Otorhinolaryngologists should be mindful and familiar with the presentation and work up of mucosal leishmaniasis to facilitate prompt diagnosis and treatment.

REFERENCES