Unique Clinical Presentations of Mucocutaneous Leishmaniasis in the Upperway: Growth Disease in North America

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INTRODUCTION

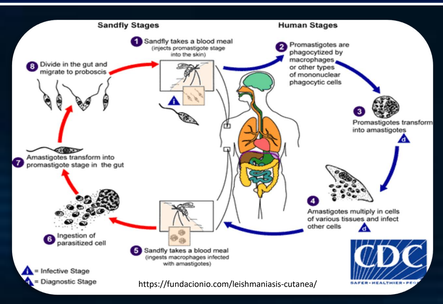
Mucocutaneous leishmaniasis is present in more than 90% of the tropical countries in the world. Factors such as travels to tropical areas for work or vacation, deforestation, climate change, migration, blood transfusion, etc. have provoked the appearance of more and more cases in North America.
Clinically, it manifests through non-painful chronic ulcers on exposed skin (face, neck, limbs) and months or years later through nasal or nasopharingeal compromise due to the migration of the *Leishmania* parasite to the mucuous tissue of these areas. Diverse personal factor make the clinical presentation vary.

METHODS

We have compilled a graphic collection of multiple atypical clinical lesions of mucocutaneous leishmaniasis in the upper airway of patients who have been studied and treated by Otolaryngology over the last 25 years in some hospital institutions and private practice in Bogotá D.C., Colombia, referred from territories with high prevalence due to their degree of complexity and atypicality.

RESULTS

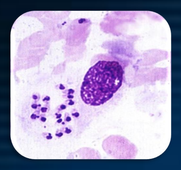
The nasal septum perforation is the most frequent typical presentation in the upper airway. We have documented in this poster many unusual presentations and sequels in soft tissue such as: Nasal cellulitis, resorption of the columella and nasal septum, granulomatous compromise of the turbinates, nasopharyngeal scars, scars in the torus tubarius, ulcerative lesions in the oropharynx and soft palate, as well as raised lesions with non-granulomatous characteristics, which raise multiple differential diagnoses (non-infectious granulomatous diseases and vasculitis, benign tumors of different origins, cancer, trauma sequelae, among others). For this reason, biopsy is key for diagnosis. The poster shows some typical and atypical clinical photos of the leishamiasis lesions in nasal cavity, nasopharynx and oral cavity.
During the revision of these patients' antecedents, it was found that one of them had systemic treatment for tuberculosis a year before the leishmaniasis infection in oral cavity and another had radiotherapy due to a tumor in the orbital cavity 3 years before an atypical nasal lesion caused by leishmaniasis. Those treatments might explain the unusual clinical presentation in both cases. In the rest of the documented cases, no explanation for their atypicality was found.



https://fundacionio.com/leishmaniasis-cutanea/

Parasitic forms

Amastigote form



Promastigote form

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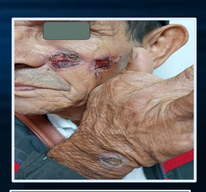
Typical clinical lesions in Leishmaniasis

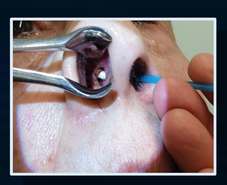
Skin manifestations



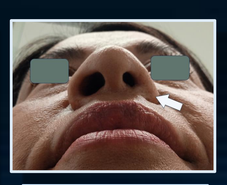
Acute ulcers (face and hand)

Old scar (sequel)

Nasal manifestations



Septal perforation



Alar retraction (sequel)

Atypical presentations in Leishmaniasis

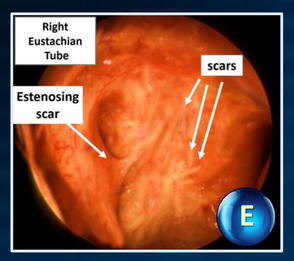
Nose

Nasal celullitis

Septal ulcer

Columellar absence

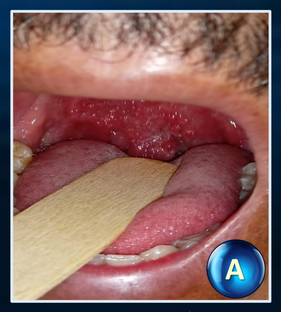
Severe alar ulcer



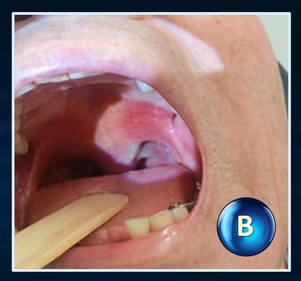
Nasopharyngeal scars

Alar retraction

Pharynx



Granulomatous soft palate



Granulomatous and erytroplakia lesion in soft palate

Thickening of the anterior pillar and cheek ulcer

Pharyngeal ulcer

DIAGNOSIS CONFIRMATION

The diagnosis is based on the identification of amastigotes in the affected tissue. For this reason, direct smears and biopsies are the classic way to identify the disease.
However, in the last 30 years the following procedures have emerged:
-**Genetic and molecular techniques**: Rapid diagnostic tests (identifying parasite antigens), genetic tests such as PCR for *Leishmania* DNA (specificity levels between 50% and 97%), multilocus microsatellite typing, multilocus sequence analysis, and NGS to typify species.
-**Inmunodiagnostic techniques**: Identification of *Leishmania* recombinant antigens and affine synthetic peptides.
-**AI-based algorythms: D**efine clinical profiles associated to patterns, facilitating the diagnosis typification and treatment of the disease.

CONCLUSION

Infections by Leishmaniasis have typical clinical presentations on skin and the most frequent in the nose is the septum perforation, although atypical ones can be found. Biopsies of the lesions are necessary to confirm the diagnosis. It is mainly treated with pentavalent antimonials and, with much less effectiveness, amphotericin B, miltefosine, and itraconazole. The clinical presentation and suspicion in patients who have traveled or live in tropical areas is key to diagnose and treat the disease early, avoiding complications and sequelae in the upper airway.

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