LUDWIG'S ANGINA COMPLICATED WITH A MASSIVE NECROTIZING FASCIITIS CAUSED BY *BACILLIUS SPP*. A CASE REPORT.

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INTRODUCTION

Ludwig's Angina (LA) and Necrotizing Fasciitis (NF) are life-threatening complications of cervicofacial infections. In LA, the polymicrobial flora causes an aggressive form of cellulitis extending to the submandibular and submental areas bilaterally. NF is characterized by a progressive lysis and necrosis of the fasciae, usually leaving the muscular plane unharmed. Both entities create and important systemic toxicity and expand rapidly through the fascial spaces.¹

The immunological state greatly affects the severity of LA and NF, and diseases like Diabetes Mellitus (DM) are known for are known to immunosuppress the patient and allowing aggressive progressions of maxillofacial infections.² Bacteria commonly found in these infections include *Streptococcus spp, Staphylococcus spp, Klebsiella pneumoniae*³ and, in exceptional cases, *Bacillius spp* can cause severe infections due to the production of necrotizing exotoxins. On a systemic level, the different consequences of these infections can evolve into a multiorganic failure, leading to the death of the patient.⁴

OBJECTIVE

Describe a case of an uncontrolled diabetic patient with a Ludwig's Angina which progressed to a massive Necrotizing Fasciitis caused by Bacillius spp.

CASE REPORT

25-year-old: Male patient. Presenting a bilateral and painful submandibular, sublingual and submental swelling with 3 days of evolution, associated with dyspnea, dysphagia and odynophagia. His medical record was remarkable for an uncontrolled type I DM.

FIRST 24 HOURS OF INTRAHOSPITAL STAY

• Intraorally, multiple bilateral radicular rests in the mandible associated with purulent discharge were observed, leading to the diagnosis of LA and thus.

• Hospital admission was decided for a multidisciplinary management along with the Internal Medicine service.Insulinetherapy and fluid-therapy along with an empirical IV triple antibiotic therapy was immediately started (Vancomycin, Ampicillin+Sulbactam and Clindamycin) until culture results could be obtained.

FIRST SURGICAL INTERVENTION UNDER GENERAL ANESTHESIA

Surgical drainage along with debridement of the necrotic areas and extraction of the non-vital teeth was performed.

HISTOPATHOLOGICAL ANALYSIS

Confirming the diagnosis of NF.

A CULTURE OF THE DRAINED SECRETION WAS PROCESSED

Revealing a moderate amount of *Bacillius spp* sensitive to Meropenem. The patient was translated to the ICU and his status had a mild improvement.

24 HOURS LATER

The patient developed a diabetic ketoacidosis with septic shock, and the areas of NF kept extending through the neck and supraclavicular regions .

SECOND SURGICAL INTERVENTION

A second surgical intervention along with the Thoracic Surgery service was decided and another surgical debridement was performed to approach infraclavicular region showing the massive and deep extension of the infection, even involving muscular and vascular structures.



THE PATIENT DIED DUE TO A MULTIORGANIC FAILURE.



Signs of sepsis were observed and the swelling extended to the infraclavicular area bilaterally. Also, areas of NF appeared in the submandibular and bilateral retroauricular regions (Figure 1).



Second surgical intervention: The extension of the infection is massive. The entire platysma muscle was compromised. The inferior border of the mandible on the left side can be observed (Figure 2)

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