Case Report

A Case Report on Mucocutaneous Leishmaniasis

Abstract

Mucocutaneous Leishmaniasis (ML) can have devastating consequences, although early detection can help avoid difficulties. This research aims to explore clinical markers that can detect ML early. The protozoal infection Leishmaniasis is caused by fungal pathogens. The skin and mucosa are affected by mucocutaneous leishmaniasis (MCL). India is home to species like Leishmania donovani and Leishmania major, which cause visceral and epidermal leishmaniasis, respectively. **The main diagnosis, therapeutic intervention and outcome:** Mucocutaneous Leishmaniasis was diagnosed after a physical examination and investigation by the doctor. Patient was treated antiepileptic drug and antianxiety drugs to reduce fear and anxiety **Therapeutic intervention: -** Antipyretics and antibiotics such as Tab. Paracetamol, Injection Ceftriaxone 1gm IV (BD), Tablet Pantoprazole 40 Mg iv (OD), Inj. Ondansetron 4mg iv (TDS) were given for 7 days in this instance with Narcolepsy. **Outcome:** For fever, the patient was given medications prescribed by the doctor, such as paracetamol. In addition, the patient's condition improved as a result of the medical treatment. The patient's problems had subsided, and he reported feeling better. **Nursing perspectives: -** To control fever, the patient was given medications prescribed by the doctor, such as paracetamol. In addition, the patient's condition improved as a result of the medical treatment. The patient's problems had subsided, and he was in better shape. **Conclusion:** The patient was admitted to A.V.B.R. Hospital with a headache, breathing difficulties, muscle weakness, walking difficulties, reduced balance and coordination, and other symptoms. In this case of Mucocutaneous Leishmaniasis, the patient received the necessary treatment and medications. The condition of the patient had improved.

Keywords: Leishmania, Parasites, Otolaryngology, Leptospirosis, Zoonotic

Introduction

Leishmaniasis is a parasite infection in tropical parts of the world and southern Europe. It's thought to be a tropical illness that has gone undiscovered (NTD). Leishmaniasis is caused by parasitic infection with Leishmania parasites, disseminated via the bite sand flies. [1,2] In Brazil and neighboring regions, leptospirosis (ATL) is a major public health issue. It is the second most popular protozoa-related disease, after malaria, and is found in 88 countries. Minas Gerais ranks eighth in Brazil and first in Southeastern Brazil in terms of reported instances. ATL transmission has been confirmed in 401 of the state's 853 communities. Between 2001 and 2006, 100 people died due to the disease. [3,4]

ATL is a non-contagious viral infection caused by different types of Leishmania parasites that affect the skin and mucosae. It is predominantly a zoonotic illness that affects animals other than humans and can cause secondary infestation. [5,6] Nasal and or oral mucosae involvement is often more severe than cutaneous involvement. Furthermore, the psychological stigma associated with this condition has yet to be evaluated by health surveillance services, as only individuals who experience its repercussions may feel it. This disease's psychological, social, and behavioral repercussions are more important than the physical discomfort. The biological component that governs parasite spread is development time, and it is one of the primary drivers of the severity and consequences of mucosal ulcers. [6,7] The incubation time for ATL varies greatly. When the inoculation time is known, infection in closed communities has a time of incubation of 10 to 60 days. The cutaneous form of the illness predominates in 95 percent of reported cases, with the mucosal variety accounting for 3 percent to 5 percent of cases. [8,9]

Patient Information

Patient-Specific Information:

In A. V. B. R. H., a 29-year-old man was admitted on 06-07-21, with the chief complaint of loss of muscle control, breathlessness, or muscle weakness, fatigue or hallucinations, difficulty with gait, impaired balance and coordination, fever, headache, and chills, the doctor diagnosed a case of Mucocutaneous Leishmaniasis after a physical examination and investigation.

Medical history: On 06th July 2021, a 29-year-old male patient was admitted to the A. V. B. R. hospital. The patient had history of feeling very sick. He had been suffering from loss of muscle control, muscle paralysis, muscle weakness, weariness, or hallucinations for a few days and

they were getting worse. He had fever, headache, chills, and breathlessness five days before admission, and he took illicit drugs at regular doses on his own.

Family History: He belongs to nuclear family. In the patient's family, there is no hereditary history like DM, Asthma, Hypertension, etc.

Psycho-social History: He was mentally stable, conscious and oriented to date time and place. He had maintained a good relationship with doctors and nurses and other patients.

Clinical Finding:

Physical examination: Obesity is thought to be linked to the illness. Patients with cataplexy usually have atonia in their limbs and neck muscles, as well as a loss of deep tendon reflexes.

Important clinical findings: Blood Investigation: WBC:-<5000 cells/mm3. RBC: - 20,000-40,000 (cells/mcL), IgM and IgG test Positive, Platelet count 12,000 cells/mm^3

Timeline: He took treatment in A. V. B. R. H. and got the proper treatment. Taking proper medication and now he has been good condition.

Therapeutic interventions: Present case of took the Mucocutaneous Leishmaniasis, antipyretics are drugs that are administered to people who have a fever. Tablet Paracetamol BD, Injection Ceftriaxone 1gm IV (BD), Injection Pantoprazole 40 Mg IV (OD), Injection Ondansetron 4mg Intravenous (TDS).

Nursing perspectives: - Fluid replacement (DNS and RL) is administered, and vital signs are monitored hourly. 2 hourly temperature chart was rigorously adhered to, as was the intake output chart. Tab. Antibiotics with paracetamol were prescribed by the doctor.

Discussion:

ML was discovered in people who had granulomatous nasal/oral lesions that aren't specific. A history of skin lesion or a scan showing skin leishmaniasis did not appear to be a good predictor of mucosal leishmaniasis diagnosis in the current study. In this study, 62% of the patients had no recollection of skin involvement and no possibly a scar from a prior lesion. This is significant information because it demonstrates the limited value of using the patient's bad history of prior leishmaniasis or the absence of a scar as markers not to consider the diagnosis hypothesis of mucous membrane leishmaniasis in a diagnosis of chronic rhinitis without a patient in a diagnose rhinitis without the need for a patient. As confirmed by the current work, we are left

with immunological testing to help identify mucosal leishmaniasis because the parasite is not usually identified in skin lesions. [10,11]

The major issue of the Health Department's Leishmaniasis Tegumentary Americana Surveillance Program, which aimed to reduce deformities caused by the disease, is early mucosal leishmaniasis detection. [12,13]

The extended delay between the onset of symptoms and an etiology diagnosis of mucosal leishmaniasis may indicate a lack of training in most physicians on a right approach for mucous membrane leishmaniasis, either by the family physician or by the infectious disease specialist. (Who is frequently not trained to properly approach nasal complaints) or by the specialist (who frequently only performs a nasopharyngeal biopsy, which is non-conclusive in most cases in mucosal leishmaniasis). [14]

Diagnostic delays, which lasted six years in the current research, might be explained by the patients' failure to seek medical attention. Nonetheless, because persistent nasal blockage is a complaint that directly impacts an individual's quality of life and ability to work, it's improbable that the delay was due to a failure to seek medical help. Patients with LM have reported obtaining long-term treatment for chronic rhinitis without gaining a definitive etiological diagnosis[15]. Silveira et al. discovered that the period between the cutaneous lesion and oropharyngeal involvement was up to two years in 30.4 percent of patients and more than ten years in 50.0 percent in research conducted in the state of Paraná. [16]

The Montenegro skin test, according to several studies, is the most widely used and reliable for screening persons with ATL suspicion, with over 90% sensitivity and specificity. A positive Montenegro test in an endemic location could imply prior leishmaniasis, prior the antigen used in the test is injected, asymptomatic parasite exposure (infection), allergy to the test dilution agent, or cross-reactivity with other disorders (Chagas, sporotrichosis, Virchowian leprosy, tuberculosis, chromo mycosis, and others). The validity of the results, like with any other screening test, will be determined by clinical history and the prevalence of illness in the community being examined. The lack of a link between papule diameter and symptom onset in this series' Dubrovnik test, as well as the mean papule diameter, is consistent with previous findings. [5]

The indirect immunofluorescence search for antibodies should not be performed alone to diagnose ATL; it should be utilized in concert with other illnesses in the differential diagnosis,

Montenegro test results, and other parasite methods. Patients with mucosal lesions had greater and longer-lasting titers of this reactivity, which could be used to track drug response in mucosal disease patients. We can better understand why antibody production is restricted when assessed using the immunofluorescence approach because leishmania is a parasite that enhances cell immunity. The Polymerase Chain Reaction (PCR) is an effective approach for detecting ATL, especially when the goal is to identify the species because it's difficult to separate parasites from epithelial lesions. Despite the fact that it is rarely employed in routine diagnostic procedures, the reaction has been used for research purposes. Adenoma's carcinoma, basal cell carcinoma, lymphomas, rhinophyma, rhinosporidiosis, entomophthoromycosis, Virchowian leprosy, tertiary syphilis, septal rupture or drug usage, rhinitis, sinusitis, sarcoidosis, Wegener Specimen. [6] Notification may be influenced by social and cultural factors. In research conducted in Acre, an endemic location with significant public leishmaniasis prevention efforts, the period between symptom onset and medical intervention ranged from 2 to 9 months. A rigorous search for questionable cases and a well-functioning reporting system are most likely to blame for the increased occurrence of the mucosal form[14,15].

Patients may be treated as a result of spontaneous demand at healthcare facilities, an active search for patients in transmission zones - as suggested by epidemiological surveillance or the family healthcare team; or, ultimately, in high-risk areas with limited access to health services.

Conclusion:

Finally, educational, social, economic, and geographic characteristics appear to be linked to the late identification of mucosal leishmaniasis. The otorhinolaryngological exam and the Montenegro test remain the most essential parts in the diagnosis, but they are frequently presumptive. More research employing novel techniques is needed to increase diagnostic accuracy to identify in mucosal lesions, the parasite or its components.

COMPETING INTERESTS DISCLAIMER:

Authors have declared that no competing interests exist. The products used for this research are commonly and predominantly use products in our area of research and country. There is absolutely no conflict of interest between the authors and producers of the products because we do not intend to use these products as an avenue for any litigation but for the advancement of knowledge. Also, the research was not funded by the producing company rather it was funded by personal efforts of the authors.

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