



## NASAL LEPROMA - AN UNUSUAL PRESENTATION OF LEPROSY

Shivakumar Thiagarajan Sambandan A.P Ambujam S

MGMCRI, Puducherry India

### **Abstract:**

Leprosy is a disease known to mankind from time immemorial. It is a chronic granulomatous disease caused by mycobacterium leprae, an acid fast bacilli, which affect all groups with no sex predilection. Usually they present with numb hypopigmented patches & localized paresthesia.<sup>1</sup> Here we present to you a case of lepromatous leprosy, with only nasal symptoms as their predominant complaints, due to its unusual nature of presentation.

**CASE REPORT:** A 31 yrs old male patient presented in the ENT OPD with c/o bilateral nasal obstruction, anosmia, snoring, mouth breathing and swelling over the dorsum of the nose for 4 months duration. There was no history of contacts with any leprosy patient in the family or elsewhere and no other ENT symptoms. On examination an ovoid 1 X 1cms brownish black firm swelling present on the left side of the nasal dorsum (Figure.1), there was no local rise of

temperature or tenderness. Anterior rhinoscopy showed polypoidal changes of the nasal mucosal (over the septum as well as the lateral wall of the nose). Rest of the ENT examination was within normal limits. X-Ray of the paranasal sinus showed no gross abnormalities. Diagnostic nasal endoscopy revealed nodular lesion spread across the entire nasal mucosa (Figure.2), a biopsy of which was taken and sent for histopathology. FNAC of the nodular lesion on the nasal dorsum was also done. At this juncture, Rhinoscleroma was our clinical diagnosis based on the above clinical picture. But to our surprise both the histopathology and FNAC report were reported as lepromatous leprosy with numerous acid fast bacilli across the entire field (Figure.3). Following this patient was referred to the department of Dermatology (DVL), where the dermatological examination done showed non tender thickened peripheral nerves on both sides and slit skin smear was highly positive (5+). Subsequently the patient was started on Multi drug treatment (MDT), i.e. , Rifampicin (600mg/day X 2 weeks, then subsequently 600mg/month under supervision), Dapsone (100mg/day) and clofazamine (100mg on alternate days), for 2 years duration.<sup>1</sup> The patient is currently on follow-up and is doing well.

**DISCUSSION:** Leprosy is a slowly progressive, chronic infectious disease caused by the bacillus *Mycobacterium leprae*. It is a very serious, mutilating and stigmatizing disease and early diagnosis and therapy is the most important strategy for its control. The skin and peripheral nerves are the most affected organs. It is highly infective, but has low pathogenicity and low virulence with a long incubation period. The geographical distribution of leprosy has varied greatly with time and it is now endemic only in South East Asia, African countries & Central America, such as India, Nepal, Pakistan, Srilanka and Brazil. In India its common in Tamilnadu, Orrisa & Bihar.<sup>1</sup> The diagnosis of leprosy is made from the clinical picture, but must be complimented by slit skin smear. Leprosy has a number of distinct clinical presentations.

Indeterminate leprosy is frequently the initial form consisting of a few lesions that either evolves into the other forms or resolves spontaneously. Lepromatous leprosy is the more contagious form and affects mainly the skin. In addition, some peripheral nerves may be thickened and other symptoms may be present. The tuberculoid form affects the skin and nerves, although usually there are few lesions. There is also a form borderline between the lepromatous and tuberculoid forms.<sup>2</sup> Current treatment of leprosy involves use of 3 drugs: rifampicin, clofazimine, and dapsone. Multidrug therapy aims to effectively eliminate *M. leprae* in the shortest possible time to prevent resistance from occurring. The duration of therapy is 12 to 24 months. The clinical features and the histological picture depend on the patient's immune response. Because effective chemotherapy has become available, leprosy can now be cured, and frightening disabilities are therefore prevented. Only when doctors, other health workers, and the population in endemic countries become fully aware of, and be able to recognize, the disease in its initial phase, will it be possible for therapy to be instituted at the very beginning with either the standard scheme or the newer ones. Intervention at such an early stage will avoid the onset of the more serious signs and symptoms, meaning that leprosy will eventually become a less important public health problem.<sup>3</sup> The nasal mucosa plays the main role as the entry and the exit of leprosy bacilli and the nasal involvement may precede the skin lesions by several years. The nasal mucosa offers favourable conditions for the growth of the organisms and is readily accessible to infection by droplets, and therefore, it could be one of the primary sites of involvement in leprosy. Nasal biopsy shows positivity in nearly 100% of the lepromatous leprosy patients, with the spectrum decreasing toward the tuberculoid (TT) pole. Patients with TT or indeterminate forms do not present any nasal alterations, showing that they are the true paucibacillary forms.<sup>4</sup> Changes suggestive of leprosy viz., nerve and smooth muscle inflammation with a few acid fast bacilli in

a proportion of the biopsies. The molecular investigation of invasive nasal biopsies by PCR tests has proven to be useful in defining patients of higher risk of transmission and risk-group contacts, which is an important step towards the elimination of leprosy as a public health.<sup>5</sup> Hence we conclude by saying that leprosy even today presents in various less common & different ways, for which the health care provider must be prepared for, to identify and treat them early, so as to prevent mutilating sequelae of this well-known disease.



Figure 1



Figure 2

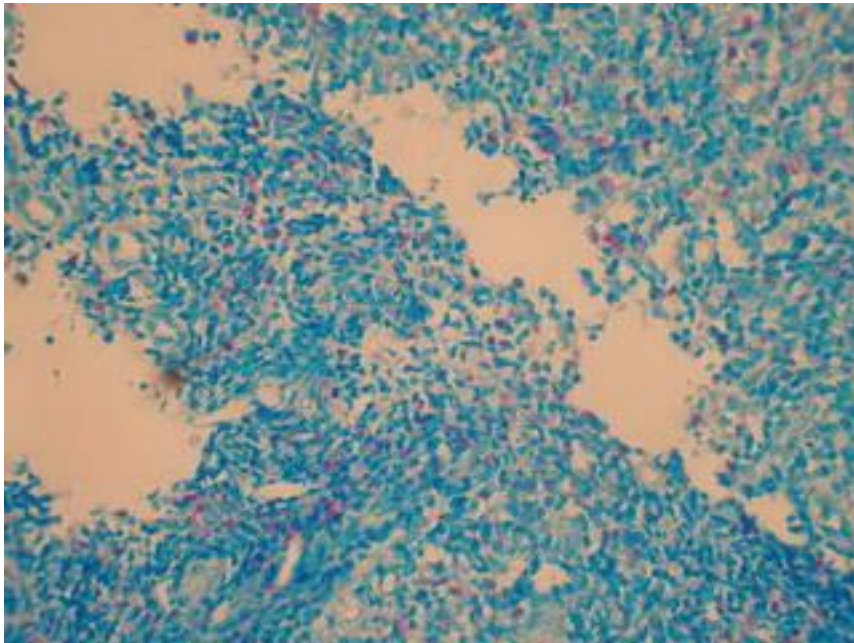


Figure 3

## **REFERENCES:**

1. S.Kameshwaran, Mohan Kameshwaran. ENT disorders in a tropical environment. MERF Publications, 2<sup>nd</sup> edition; 95-104.
2. Chacko CJ, Bhanu T, Victor V, Alexander R, Taylor PM, Job CK. The significance of changes in the nasal mucosa in indeterminate, tuberculoid and borderline leprosy. *Lepr India*. 1979 Jan;51(1):8-22.
3. Ramos-e-Silva M, Rebello PF. Leprosy. Recognition and treatment. *Am J Clin Dermatol*. 2001;2(4):203-11.
4. [Melo Naves M](#), [Gomes Patrocínio L](#), [Patrocínio JA](#), [Naves Mota FM](#), [Diniz de Souza A](#), [Negrão Fleury R](#), et al. Contribution of nasal biopsy to leprosy diagnosis. [Am J Rhinol Allergy](#). 2009 Mar-Apr;23(2):177-80.
5. Patrocínio LG, Goulart IM, Goulart LR, Patrocínio JA, Ferreira FR, Fleury RN. Detection of *Mycobacterium leprae* in nasal mucosa biopsies by the polymerase chain reaction. *FEMS Immunol Med Microbiol*. 2005 Jun 1;44(3):311-6.

