Indian J Lepr 2023, 95 : 81-85

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Case Report

A Case of Lepromatous Leprosy with Laryngeal Involvement Presenting as Dysphonia

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Received : 25.05.2022 Revised : 08.11.2022 Accepted : 15.12.2022

Involvement of larynx is a uncommon manifestation but could be the first time when the patient may be reporting to a specialist. This is the case report of a 65-year-old man who presented with dysphonia, was evaluated and was diagnosed as lepromatous leprosy with laryngeal involvement. On clinical examination the patient was found to have signs of leprosy – leonine face, nodular involvement of ears, madarosis, oedema of hands and feet, trophic ulcer on right foot. Bilateral greater auricular nerves were found to be enlarged. Video laryngoscopy revealed pale edematous epiglottis, arytenoid and aryepiglottic folds, with nodules on epiglottis. Biopsy from aryepiglottic fold and skin both was done. The diagnosis of lepromatous leprosy was confirmed with histopathology of biopsy from both skin and epiglottic fold. MRI imaging of the neck with contrast showed diffuse hyperintensity in the glottic-supraglottic larynx with asymmetry in the aryepiglottic fold and vocal cord. This experience shows that clinical suspicion is most critical element in reaching the diagnosis of leprosy.

Keywords : Lepromatous Leprosy, Laryngeal Involvement, Dysphonia

Introduction

Leprosy is an ancient disease caused by *Mycobacterium leprae*, an acid fast bacillus. Leprosy is still a taboo in many countries. Fortunately, with the advent of multi drug therapy, the scenario towards leprosy has changed (Britton & Lockwood 2004). The disease has a predilection for the skin and the peripheral nervous system. It is often known for its associated physical deformities. Laryngeal involvement is rare in leprosy and is seen in the latter stage. Lepromatous laryngitis is an uncommon form of chronic laryngitis. We report a case of a 65-year-old man who presented with dysphonia, was evaluated and was diagnosed as lepromatous leprosy with laryngeal involvement.

Case report

A 65 year old Indian man, resident of a village in Sahyadri region in Maharashtra, presented with change in voice since 1 month duration. There was no history of breathlessness or difficulty in deglutition. There was no history of fever, cough, or nasal secretions. He gave a history of swelling on both hands and feet for 6 months. He was not a known case of hypertension, diabetes mellitus, asthma or tuberculosis.

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Fig. 1A : Leonine face of Lepromatous leprosy.

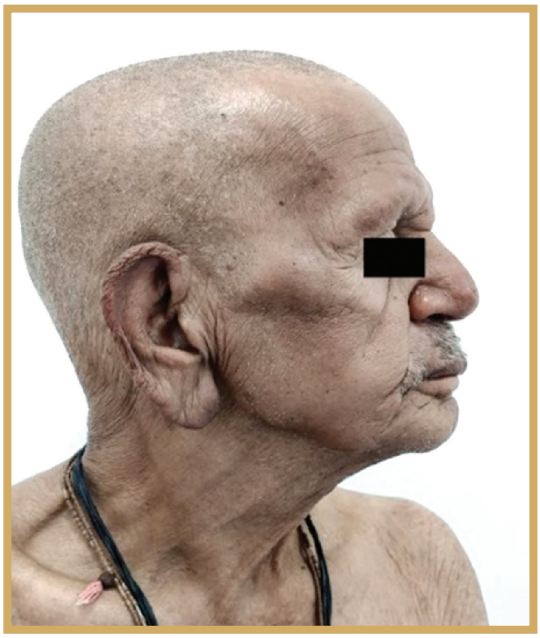


Fig. 1B : Madarosis (loss of eyebrows), nodular infiltration over face and ear lobes.

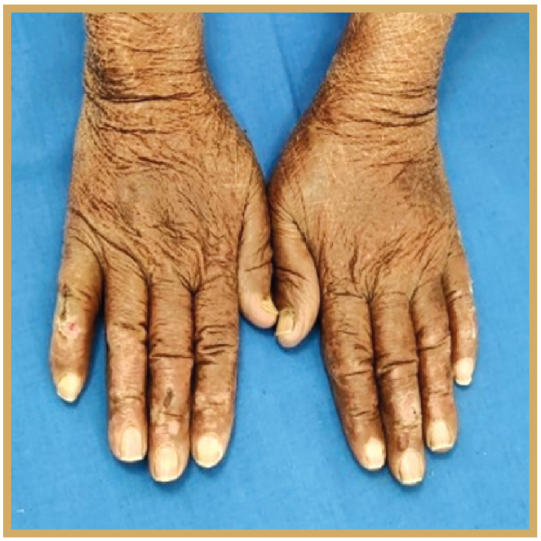


Fig. 2A : Injuries on fingers, thickened skin folds.

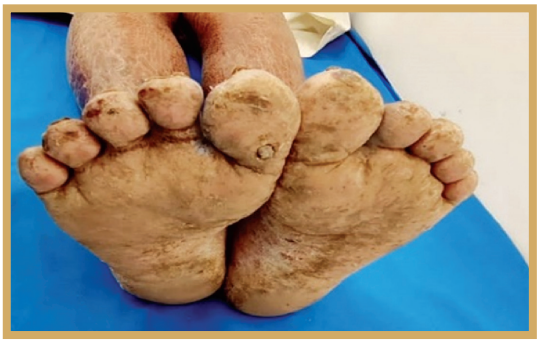


Fig. 2B : Injuries on sole and trophic ulcers on toes.

On examination he was found to have "leonine facies" (Figs. 1A & 1B) and madarosis, infiltration over face and ear lobes. Visibly enlarged greater auricular nerve on right side of neck (Fig. 1B). Both the hands and feet were edematous with trophic ulcers on right feet which he was not aware because of impaired sensation (Figs. 2A & 2B). Nervous system examination showed enlarged bilateral ulnar nerves on palpation. His physical examination of vital signs like blood pressure and pulse were within normal limits.

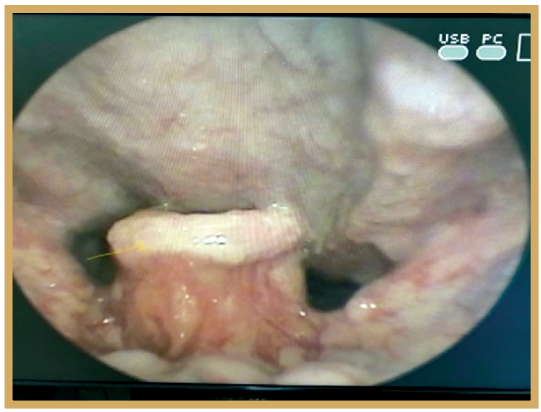


Fig. 3A : Video laryngoscopy shows pale laryngeal mucosa with thickened and nodular surface of epiglottis.

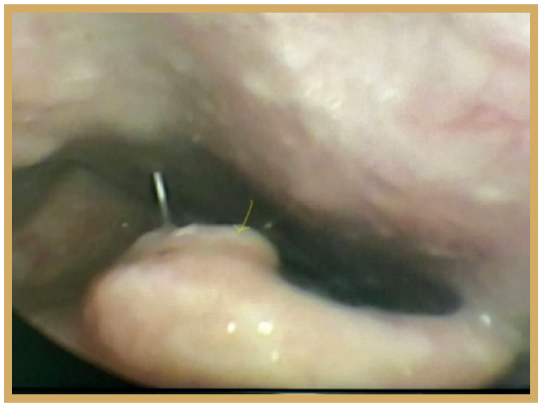


Fig. 3B : Nodule on right side of epiglottis.

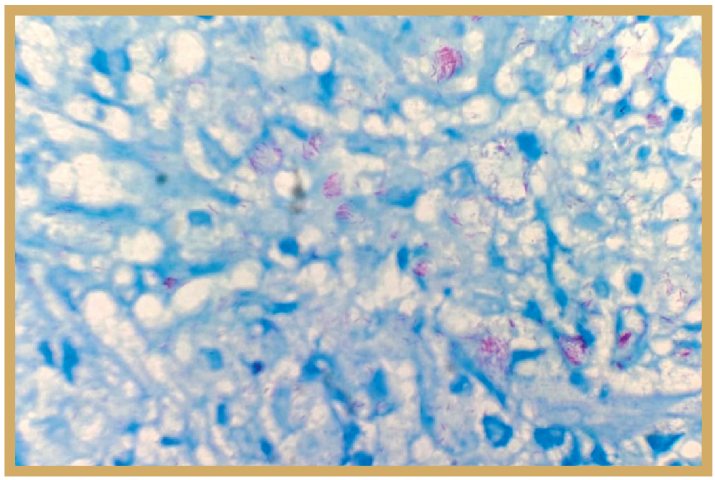
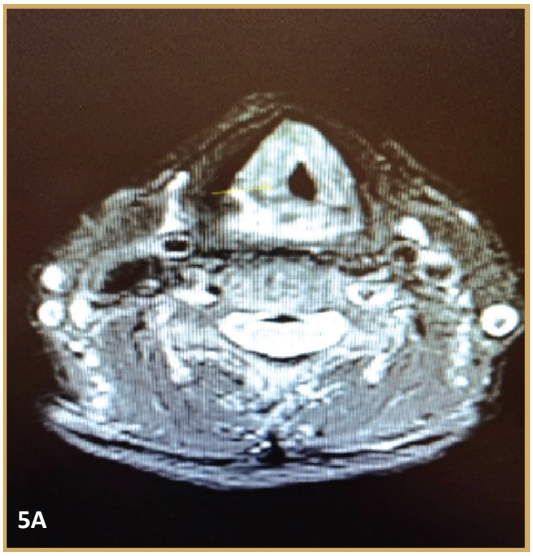
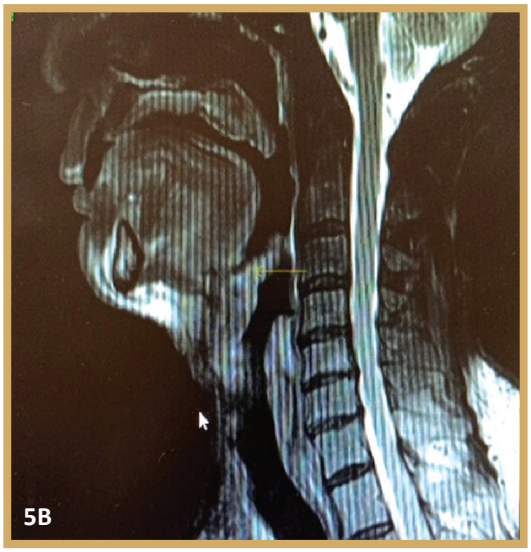


Fig. 4 : Histopathology (modified ZN stain) of biopsy from epiglottic fold showing multiple Acid Fast Bacilli (*Mycobacterium leprae*) arranged in clusters and globi.

Thorough ear, nose, oral cavity examination showed erythema on dorsum of nose, pale nasal and oral mucosa. Bilateral greater auricular nerves were enlarged. Video laryngoscopy demonstrated pale edematous epiglottis, arytenoid and aryepiglottic folds (Fig. 3A), with nodules on epiglottis (Fig. 3B), post cricoid region. Thickened vocal cords, with adequate glottis chink seen, overall laryngeal mucosa appeared pale.

All routine laboratory investigations like complete blood count, renal function tests, liver function tests, blood sugar level, urine examination were within normal limits.





Figs. 5A (left), 5B (right) : MRI (Magnetic Resonance Image) neck with contrast-axial and sagittal plane images respectively, showing diffuse hyper-intensity in the glottic-supraglottic larynx with asymmetry in the aryepiglottic fold and vocal cords.

Dermatological examination was done in view of suspected leprosy. Slit skin smear from ear lobe showed 5+ acid fast bacilli. Skin biopsy and biopsy from epiglottic fold were done. Histopathology report confirmed diagnosis of lepromatous leprosy with Fite-Faraco staining (Fig. 4) and ruled out tuberculosis or malignancy. MRI imaging of the neck with contrast showed diffuse hyperintensity in the glottic-supraglottic larynx with asymmetry in the aryepiglottic fold and vocal cord, these findings were suggestive of an infective-inflammatory etiology (Figs. 5A & 5B).

Discussion

Laryngeal involvement in Leprosy (Hansen's disease) is uncommon and occurs only when there is concurrent systemic disease and in the later stage (Gupta et al 1980) Epiglottis is first to get involved in the larynx in laryngeal leprosy (Gupta et al 1984). Cords are usually involved after cutaneous disease, hence the gap between laryngeal symptoms and skin manifestations occurs (Jaffe 1971). Cough, dysphonia of muffled quality is a frequent symptom in laryngeal leprosy. Extensive involvement can cause breathing difficulty and may need emergency tracheostomy. Healing leads to fibrosis, if severe may need tracheostomy. Treatment is with multi drug therapy with dapsone, rifampicin and clofazimine for long duration (Gupta et al 1980). Periodical screening for laryngeal pathology in patients with lepromatous leprosy should be done (Soni 1992).

In a study, autopsy of 150 patients with leprosy, Mitsuda and Ogawa reported a rate of 1.3% deaths due to laryngeal involvement. (Mitsuda & Ogawa 1937). In a case series of 8 patients of leprosy with of laryngeal involvement, 1 needed emergency tracheostomy (Fleury & Duerksen 2007).

We report this rare case who presented with symptoms of dysphonia and later on after careful examination, other signs of leprosy were found. Since he did not have airway obstruction, we avoided doing tracheostomy. We started him on multi drug treatment with dapsone, rifampicin and clofazimine. He is on regular follow up and showing improvement.

Conclusion

Though rare, lepromatous laryngitis should be considered in patients presenting with chronic dysphonia.

Acknowledgements

We would like to thank Dr Abhijit Patil, Radiology Department for the MRI report, Dr Anand Bhosale, Pathology Department for Histopathology image and report.

References

1. Britton WJ, Lockwood DN (2004). Leprosy. *Lancet*. **363:** 1209-1219.
2. Fleury RN, Duerksen F (2007). Emergency in leprosy: involvement of the larynx. *Lepr Rev*. **78**: 148-150.
3. Gupta JC, Gandagule VN, Nigam JP et al (1980). A clinico-pathological study of laryngeal lesions in 30 cases of leprosy. *Lepr India*. **52**: 557-586.
4. Gupta OP, Jain RK, Tripathi PP et al (1984). Leprosy of the larynx: a clinicopathological study. *Int J Lepr Other Mycobact Dis*. **52**: 171-175.
5. Jaffe L (1971). Leprosy of the nose, throat and ears, a neglected subject. *Int J Lepr Other Mycobact Dis* **39** : 444-446.
6. Mitsuda K, Ogawa MA (1937). A study of 150 autopsies on cases of leprosy. *Int J Lepr.* **5** : 53–60.
7. Soni NK (1992). Leprosy of the larynx. *J Laryngol Otol*. **106** : 518-520.

How to cite this article : Handal A, Awake P, Kulkarni D et al (2023). A Case of Lepromatous Leprosy with Laryngeal Involvement Presenting as Dysphonia. *Indian J Lepr.* **95**: 81-85.