PRIMARY LARYNGEAL TUBERCULOSIS MIMICKING AS SUPRAGLOTTIC MALIGNANCY

Abhilash Shambulinge Gowda1, Prakash Tumkur Kumaraswamy2, Sundara Raju Huchaiah3, Rajeshwari Govinda Swamy4, Kamal Pandyan5

1ENT Surgeon, Department of Otorhinolaryngology, All India Institute of Speech and Hearing, Manasagangothri, Mysuru.
2Reader, Department of Otorhinolaryngology, All India Institute of Speech and Hearing, Manasagangothri, Mysuru.
3Professor, Department of Otorhinolaryngology, All India Institute of Speech and Hearing, Manasagangothri, Mysuru.
4Professor and HOD, Department of Otorhinolaryngology, All India Institute of Speech and Hearing, Manasagangothri, Mysuru.
5ENT Surgeon, Department of Otorhinolaryngology, All India Institute of Speech and Hearing, Manasagangothri, Mysuru.

ABSTRACT

BACKGROUND

Primary involvement of larynx is rare, usually it occurs as secondary to pulmonary tuberculosis. The incidence of laryngeal tuberculosis is drastically reduced due to improvement in public health care and anti-tubercular treatment. On laryngoscopy, it often mimicks supraglottic malignancy, so it is better to take a biopsy and to do histopathological examination to confirm the diagnosis.

MATERIALS AND METHODS

A 31-year-old female patient presented to our OPD with a history of hoarseness of voice and odynophagia since 6 months. General physical examination is normal. Indirect laryngoscopic examination revealed an ulcerative lesion over the epiglottis, arytenoids and interarytenoid area. Oedema and hyperaemia are noticed over the supraglottic larynx. Vocal cords are mobile on both the sides. Direct laryngoscopy and biopsy is taken to confirm the diagnosis.

RESULTS

The histopathological examination revealed hyperplastic squamous epithelium with epithelioid cells and Langhans giant cells. The patient is started on anti-tubercular treatment.

CONCLUSION

After 6 months of treatment, patient became completely asymptomatic and the lesions disappeared. Tuberculosis of larynx should be suspected in cases presenting with hoarseness of voice and odynophagia mimicking a ‘laryngopharyngeal malignancy.’

KEYWORDS

Histopathology, Tuberculosis, Malignancy.


Financial or Other, Competing Interest: None.
Submission 01-02-2017, Peer Review 25-02-2017,
Acceptance 03-03-2017, Published 09-03-2017.
Corresponding Author:
Dr. Abhilash Shambulinge Gowda,
D. No. 870,
24th Cross,
4th Main, Vidyaranyaparam,
Mysuru-570008.
E-mail: dr.abhilashs@yahoo.in
DOI: 10.14260/Jemds/2017/361

are oedematous and congested. Both the vocal cords are mobile [Figure 1, 2].

![Figure 1 and 2. Endoscopic Picture of the Larynx](image)

Serological test for human immunodeficiency virus and hepatitis B virus are non-reactive. Abdominal ultrasonography is done to rule out abdominal tuberculosis. Direct laryngoscopic examination was done under general anaesthesia and biopsy was taken and sent for histopathological examination. The histopathological examination showed hyperplastic squamous epithelium with intracellular oedema, exocytosis and focal ulceration. Subepithelium shows dense infiltration of inflammatory cells consisting of neutrophils, lymphocytes, plasma cells and eosinophils admixed with epithelioid granuloma and Langhans giant cells [Figure 3]. Ziehl-Neelsen staining on the tissue section showed the presence of scanty acid fast bacilli. Sputum AFB was negative. The patient was treated with antitubercular drugs for six months.

![Figure 3. Histopathological Picture of Laryngeal Tuberculosis](image)

**DISCUSSION**

Laryngeal tuberculosis tends to mimic laryngeal cancer and its laryngoscopic appearance often stimulates malignancy. Extrapulmonary TB in the head and neck region most frequently occurs in the cervical lymph nodes (> 90%) followed by the larynx. Involvement of the pharynx, thyroid, temporal bone, sinonasal cavity, eye and skull base are even less frequently observed.[5,6] In the past, very few cases of isolated laryngeal tuberculosis have been reported. Laryngeal tuberculosis may present in varying forms, from erythematous lesion to ulceration and growth resembling carcinoma. Shin et al[7] described four different types of laryngeal tuberculosis namely ulcerative (40.9%), non-specific (27.3%), polypoidal (22.7%) and ulcero-fungating growth (9.1%). Usually, the larynx is infected either by direct spread from the lungs or by haematogenous spread from sites other than the lungs. In the present situation, the otorhinolaryngologist faces a great difficulty to differentiate between laryngeal tuberculosis, chronic laryngitis and laryngeal malignancy. So complete work for malignancy has to be carried out before diagnosing as laryngeal tuberculosis without associated carcinoma. Odynophagia is described as an important discriminating symptom, since it is considered rare in laryngeal malignancy. Yet, from experience we know that many of the patients suffering from supraglottic malignancy present to us with a history of odynophagia.[9] Laryngeal tuberculosis occurs mostly in the middle age group with a history of progressive hoarseness and odynophagia; some factors have been found to occur in these patients that include the absence of BCG vaccination and presence of malnutrition, acquired immunodeficiency syndrome, immunosuppression, promiscuity and tobacco use. In the earlier days the most common site of laryngeal tuberculosis is posterior part of larynx, particularly in bedridden patients and in whom sputum got collected in the interarytenoid region. Fernandes et al[10] reports the most common part to be involved is the vocal cord (50% - 70%) and least affected is the epiglottis. In this case the involved site is the epiglottis, arytenoids and interarytenoid area and the patient gives the history of progressive hoarseness and odynophagia of 6 months' duration along with the history of weight loss and loss of appetite; investigation showed normal chest radiograph and negative sputum for acid bacilli in ZN staining; this led us to suspect supraglottic malignancy but histopathological findings showed tubercular granuloma and the symptoms subsided with anti-tubercular drugs, so laryngeal malignancy is ruled out. Patients presenting with hoarseness of voice without any pulmonary symptoms in endemic regions, laryngeal tuberculosis should be considered in the differential diagnosis. If the patient is not treated early laryngeal TB can result in subglottic stenosis, muscular involvement and vocal cord paralysis when the cricoarytenoid joint or recurrent laryngeal nerves are invaded.

**CONCLUSION**

The patient was treated with anti-tubercular drugs for 6 months and called for followup. The symptoms subsided and there is no evidence of any lesions of laryngeal tuberculosis. In any laryngeal disease, laryngeal tuberculosis is considered as one of the differential diagnosis, especially in case of laryngeal malignancy who presents with the history of progressive hoarseness and odynophagia. The only confirmatory diagnosis is by histopathological examination when the routine investigations for tuberculosis are negative.

**REFERENCES**


