IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 14, Issue 8 Ver. II (Aug. 2015), PP 119-122
www.iosrjournals.org

Tuberculous laryngitis mimicking supraglottic carcinoma – A case report

Wasim M Khatib[1], Sujata R Kanetkar[2], Tasneem V Bisht[3], Saket Kumar[3], Pankti Patel[3], Rajesh Karambelkar[4],Dhirajkumar B. Shukla[1].
Assistant Professor, Department of Pathology, KIMS, Karad.
Professor & HOD, Department of Pathology, KIMS, Karad.
Assistant Lecturer, Department of Pathology, KIMS, Karad.
Consultant ENT, Karad.

Abstract: *Primary tuberculous laryngitis is a rare disease with features such as hoarseness of voice, dysphagia and similar symptoms which mimic carcinoma. Incidence of tuberculosis of larynx has greatly reduced as a res ult of improved health care and effective antitubercular therapy. Direct laryngoscopy and histopathology along with ZN staining (20%) are considered as gold standard in the diagnosis of tuberculous laryngitis. Tuberculous laryngitis can present as white ulcerative lesions, nonspecific ulcerative lesions, polypoidal masses or ulcerofun gating mass lesions. Treatment of tuberculous laryngitis comprises of standard antitubercular regimen with ver y good results. Thorough investigations for tuberculosis as well as carcinoma should be under taken to rule out carcinoma. We here by present a case of a 70 year old male with hoarseness of voice, dysphagia and other symp toms, who on examination had a mass in the supraglottic region. On histopathology, diagnosis of primary tuber culous laryngitis was given.*

Keywords : *Laryngitis, tuberculosis, carcinoma, supraglottis, laryngoscopy, antitubercular therapy.*

I. Introduction

Primary tuberculous laryngitis is an extremely rare occurrence. The incidence of tuberculous laryngitis has been estimated to be less than 1% of all the cases of tuberculosis.[1] Tuberculosis is the most common disease involving the upper aerodigestive tract specifically the larynx. Tuberculous laryngitis is generally secondary to p ulmonary infection or from some other site in the body. Most common site of Mycobacterium tuberculosis infec tion is the lung, however any other site in the body can be involved primarily or secondarily. Various awareness and treatment programmes have led to decrease in the prevalence, morbidity and mortality associated with tuber culosis in India.[1,2] Tuberculosis of larynx classically develops as a result of direct spread of the tubercle bacilli fr om contaminated sputum or can also occur haematogenously.[3,4]It presents as a solid proliferative growth and ca n mimic carcinoma. Thus, proper investigations and histopathology play a vital role in the diagnosis.[5]

II. Case report

We present a case 70 year male who presented to the OPD with along history of hoarseness of voice an d dysphagia for solids. He also complained of low grade fever, decrease appetite and weight loss. He was a chro nic smoker for the two past decades. Dietary history is unremarkable. Physical examination revealed an averagel y built, type II diabetic elderly male with mild pallor, grade I hypertension and he had no lymphadenopathy or a ny other cardiovascular, respiratory or GI related abnormality. On local examination, Indirect laryngoscopy sho wed an approximately 3x2x1 cm growth involving the supraglottis. Direct fiber optic laryngoscopy revealed an ulceroproliferative growth over the left true vocal cord along with congestion and oedema of epiglottis, arytenoi ds and surrounding tissues. The vocal cords and arytenoids showed near normal movements due to presence of o edema.

Routine hematological investigations revealed microcytic hypochromic anemia with rest of the paramet ers within normal limits. The erythocytic sedimentation rate was 40 mm at the end of 1 hr. Radiological investig ations revealed an unremarkable chest X-ray. USG of neck as well as abdomen revealed no lymphadenopathy. An axial contrast enhance CT scan of neck revealed 4x3x2.5 cm tumor in left supraglottis.

A diagnosis of supraglottic laryngeal carcinoma was considered based on the above mentioned findings . Biopsy was performed and the specimen was send for histopathological examination. We received multiple(3), soft to firm, irregular, grey white to grey brown bits of tissue which were processed according standard histopat hological protocols. Slides stained with routine hematoxylin and eosin (H & E) stain were studied under light mi croscope.

Surprisingly, microscopy revealed abundant caseous necrosis and numerous granulomas composed of confluent epitheloid cells surrounded by color of mature lymphocytes, fibroblasts and few inflammatory cells (Figure 1, F

igure 2). Numerous Langhan's type of giant cells were also noted (Figure 3, Figure 4).Ziehl-Neelsen (20%) stain revealed numerous acid fast bacilli which confirms diagnosis of mycobacterial infection.

Further microbiological investigation confirmed the diagnosis of mycobacterial tuberculosis infection.

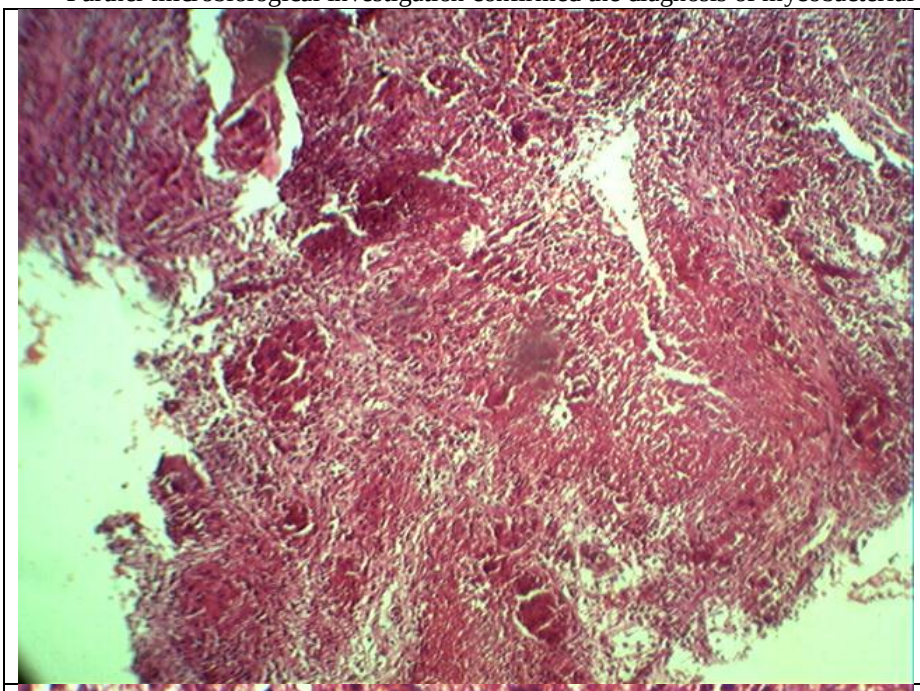

Figure 1: Photomicrograph showing areas of caseous necrosis and multiple granulomas. (H&E, 100x)

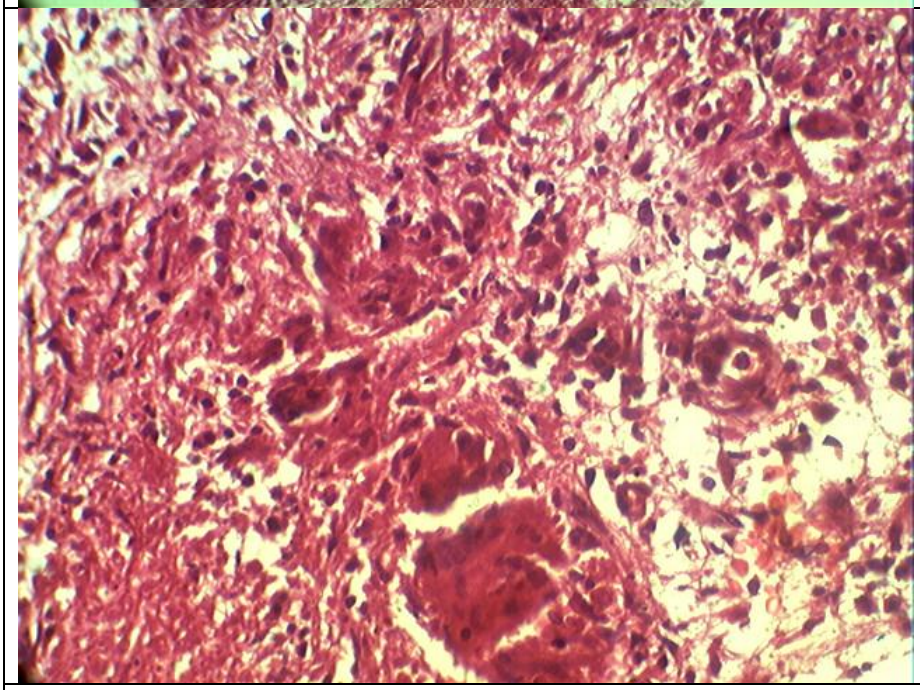

Figure 2: Photomicrograph showing areas of caseous necrosis with epithelioid cell granulomas with lymphocytic infiltrate. (H&E, 400x)

Figure 3: Photomicrograph showing numerous Langhan's type giant cells along with granulomas and areas of caseous necrosis. (H&E, 100x).

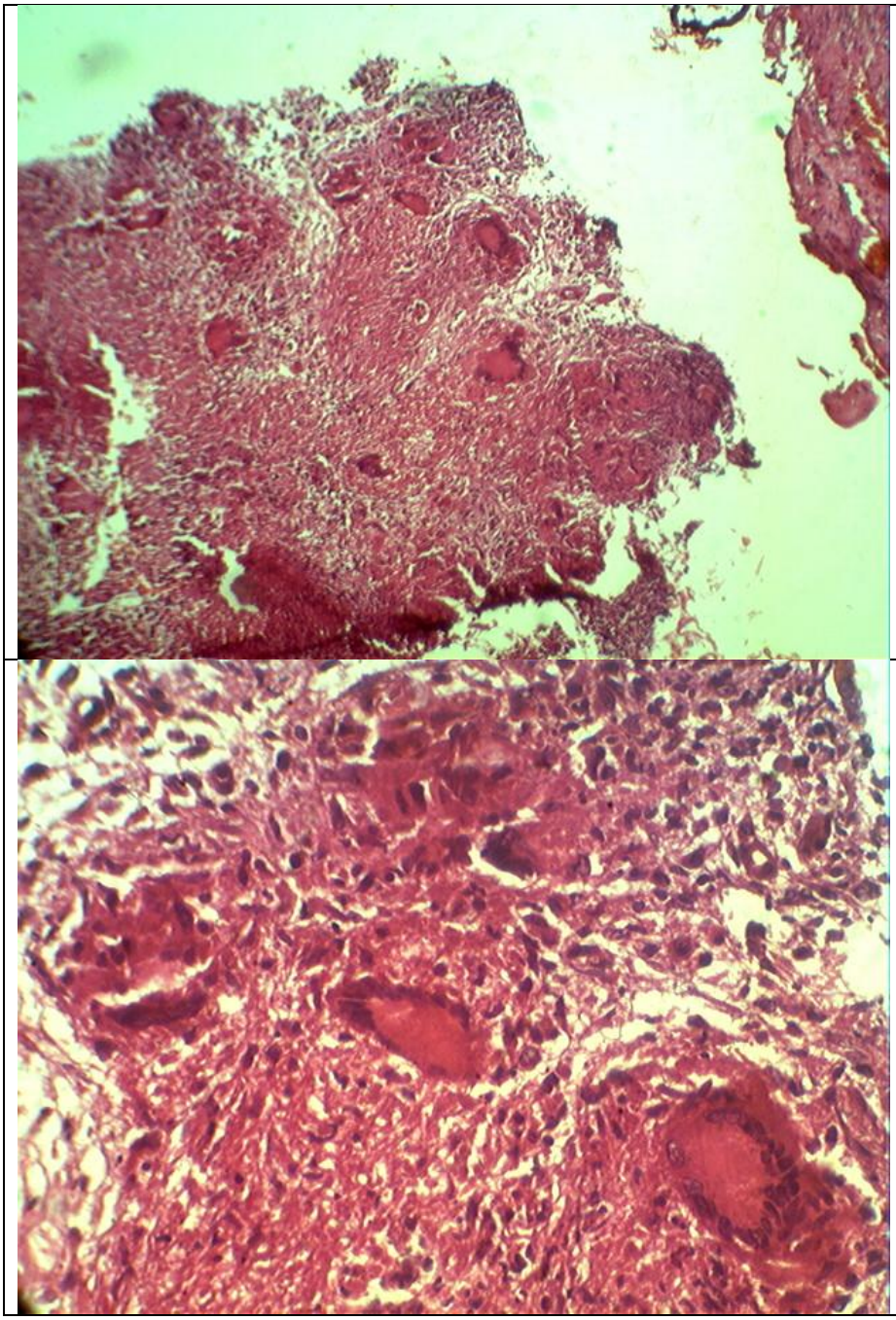

Figure 4: Photomicrograph showing multinucleated Langhan's giant cells along with epithelioid granuloma. (H&E, 400x)

III. Discussion

Primary tuberculosis of larynx is rare disease entity caused by Mycobacterium tuberculosis. Tuberculosis of the upper aerodigestive tract specifically of the larynx which is accounted to less than 1% of all tuberculosis cases is very rare.[6] Absence of pulmonary disease or evidence of tuberculosis anywhere in the body points towards a lesion being primary. Our case presented with old age, hoarseness of voice, dysphagia, low grade fever, loss of weight and tumor in the supraglottis. All these findings were inconcordance with a malignant diagnosis. Tuberculous laryngitis is most commonly seen in males with an incidence of 2-3:1 where as most commonly affected age was 40 to 60 years.[7] Isolated tuberculosis infection in the head and neck region is more commonly accounted in immunocompromised patients. Our's was a healthy elderly male.

Tuberculous laryngitis according to Shin et al.[9] can be categorized into 4 types (A) Polypoidal seen in 22% cases (B) Ulcerative in 40.9% cases (C) Nonspecific seen in 27.3% cases (D) Ulcerofungating growth seen in 9.1% cases of laryngeal tuberculosis cases. Our case presented with an ulceroproliferative growth in the supraglottis.[10]The anterior part of larynx is most commonly involved. True vocal cords are most commonly affected s

ites followed by false vocal cords, aryepiglottic folds, arytenoids, interarytenoids folds and ventricular bands. Fe rnandes et al. reported the true vocal cords most common site to be involved(50-70%).[11]
However tuberculosis and carcinoma can coexist in the same patient.Hence proper and complete investigations s hould be performed to arrive at the correct diagnosis. Tuberculous laryngitis is most common ENT presentation seen in tuberculous infection.[12]

Investigations such as direct laryngoscopy are mandatory to arrive to a diagnosis where as histopatholo gy in the form of caseating necrosis, granuloma consisting epitheloid cells, langhan's type of giant cells, lympho cytes and fibroblasts are gold standard in a diagnosis of tuberculous laryngitis.[13] Owing to clinical presentation s uch as age mass in the upper aerodigestive tract and supporting evidence, malignant should be thoroughly ruled out as tuberculosis carcinoma can coexist in the same patient.
Those patients presenting with hoarseness of voice without any pulmonary symptoms and living in endemic regi ons should be suspected of having laryngeal tuberculosis.[5]
Appropriate and aggressive antituberculous therapy generally cures the disease without any sequel with most of lesions disappearing during the treatment period.[10]

IV. Conclusion

Primary tuberculous laryngitis is a rare disease entity. Tuberculosis of larynx should be suspected in pa tients presenting with hoarseness of voice and dysphagia which generally point towards laryngophyrangeal carci noma, as treatment protocols and prognosis are different for both the conditions. However tuberculous laryngitis caries good prognosis owing to effective antitubercular therapy. Histopathology with ZN staining (20%) is gold standard in the diagnosis of laryngeal tuberculosis.

References

[1]. Egeli E, Oghan F, Alper M, Harputlouglu U, Bulut I. Epiglottic tuberculosis in a patient treated with steroids for Addison's disease. Tohoku J Exp Med 2003;201(2):119-25.
[2]. Sachdeva KS, Kumar A, Dewan P, Kumar A, Satyanarayan S. New vision for Revised National Tuberculosis Control Programme (RNTCP): Universal access – "Reaching the un-reached". Indian J Med Res 2012;135(5):690-4.
[3]. Lim JY, Kim KM, Choi EC, Kim YH, Kim HS, Choi HS : Current clinical propensity of laryngeal tuberculosis : review of 60 cases. Eur Arch Otorhinolaryngol 2006,263:838-842.
[4]. Hunter AM, Millar JW, Wightman AJ, Horne NW : The changing pattern of laryngeal tuberculosis. J LaryngolOtol 1981,95:393-398.
[5]. Krishnatreya M, Das K, Sharma A, Sharma JD. Primary laryngeal tuberculosis mimicking supraglottic carcinoma. International Journal of case Reports and Images 2013;4(7):354-357.
[6]. Raut MR, Moharana PR. Tuberculosis of Larynx : A case report. Indian J Tuberc 2012;59:231-234.
[7]. Galli J et al. Atypical isolated epiglottic tuberculosis, a case report and review of literature. Am JOtolaryngol 2002;23:237-40.
[8]. Sing B et sl. Isolated cervical tuberculosis in patients with HIV infection. Otolaryngol Head Neck Surgery 1998 Jun;118:766-70.
[9]. Shin JE, Nam SY, Yoo SJ, Kim SY. Changing trends in clinical manifestation of laryngeal tuberculosis. Laryngoscope 2000;110(11):1950-3.
[10]. Verma SK, Verma SK, Sanjay. Laryngeal tuberculosis clinically similar to laryngeal cancer. Lung India 2007;24:87-9.
[11]. Frenands L, Mesqnita A. Stridor presentation in laryngeal tuberculosis. Indian J Tuberc 1997;44:93-4.
[12]. Kulkarni NS, Gopal GS, Ghaisas SG, Gupte NA. Epidermiological considerations and clinical features of ENT tuberculosis. J LaryngolOtol 2001;115(7):555-8.
[13]. Moon WK, Han MH, Chang KH, Kim HJ, Im JG, Yeon KM, Han MC. Laryngeal tuberculosis: CT findings. AJR 1996;166:445-449.