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ACUTE LARYNGEAL ABSCESS: A CASE REPORT

ABSTRACT

Acute laryngeal abscess is a rare and potentially life-threatening condition. The clinical features have changed markedly in the post antibiotics era. It has different etiological factors and mode of presentations. Diagnosis mainly depends on a high index of suspicion, laryngoscopic examination and CT scan. Management includes immediate tracheostomy, intravenous board spectrum antibiotics and surgical drainage.

Keywords: Acute laryngeal abscess, Endoscopic drainage, Tracheostomy.

INTRODUCTION

Acute laryngeal abscess is a suppurative inflammation of larynx. it is classified into primary and secondary. In primary cases, it starts within the perichondrium usually following trauma or catarrhal inflammation.[1] Secondary case can develop as an extension of infection from tonsil and nasopharyngeal infection, malignancy and sinus infection.[2] This may be also associated with tuberculosis and syphilis.[3] Diagnosis is done by a high index of suspicion and laryngeal examination. Management includes immediate tracheostomy, broad-spectrum antibiotics, and drainage of pus.

CASE PRESENTATION

A 64 years male presented to the Emergency Room with difficulty in swallowing for 5 days, voice change for 3 days and noisy breathing for 2 days. He had been conservatively managed elsewhere for 2 days with no symptomatic relief. At presentation, he was ill-looking and bilateral hand tremors present. His pulse was 110/min, blood pressure was 140 /80 mmHg, respiratory rate was 26/min and saturation was 86% without oxygen. The patient had audible stridor, no palpable swelling in the neck was found. Oral cavity examination showed congestion of left tonsil. X-ray neck showed edematous epiglottis.

The patient was started with intravenous steroid and antibiotics and continued throughout his hospital stay. Emergency tracheostomy was performed under local anaesthesia which relieved the stridor. His hematological and biochemical profiles were within normal limits. Chest x-ray and ECG were normal. Serology was non-reactive. Flexible fibro-optic laryngoscopic examination revealed swollen and edematous left aryepiglottic fold and false cord narrowing the airway (Figure I). Left true vocal cord was difficult to visualize. Commuted Tomography (CT) scan showed large ill-defined collection(3.2 cm X 5.3cm X8.5 cm) extending from the left aryepiglottic fold to the level of post-cricoid region & left paraglottic space, epiglottis was edematous and thickened (Figure II). Direct laryngoscopic examination showed swollen left aryepiglottic fold, pus was aspirated from left paraglottic space and sent for gram stain and culture, which showed no growth. On the 8th day of admission, repeat fibro-optic flexible laryngoscopic examination revealed subsidence of swelling in the left aryepiglottic fold, bilateral vocal cords could be seen and were mobile (Figure III). On the 12th day of admission, the patient was decannulated and discharged.

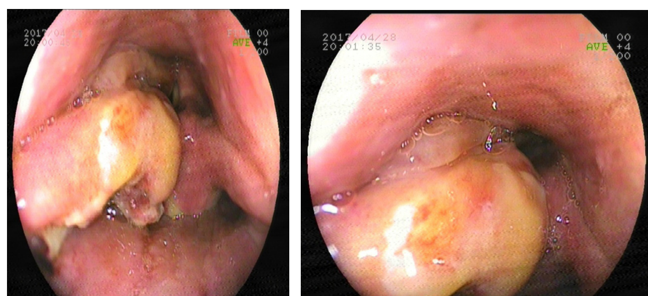

Figure I. Fiberoptic laryngoscopic findings on the 1st day of admission

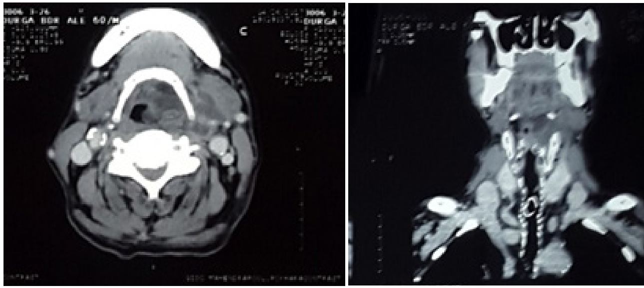

Figure II. CT Scan showing ill defined collection in paraglottic space and its extension outside larynx

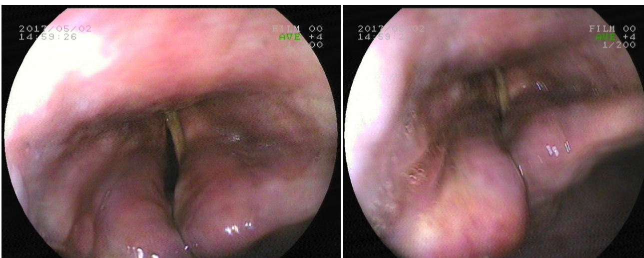

Figure III. Fiberoptic laryngoscopic findings on the 8th day of treatment

DISCUSSION

Acute laryngeal abscess is a serious condition of the larynx which leads to rapid deterioration of airway size so that urgent airway management is needed. It may be intra-laryngeal or extra-laryngeal. Intralaryngeal abscess develops from thyroid cartilage, cricoid cartilage and epiglottis. Extra laryngeal abscess usually originates from the anterior surface of the epiglottis, aryepiglottic folds or pyriform fossae and spread of abscess to the visceral space of neck. Swelling of the left aryepiglottic fold and arytenoid were present in this patient. The principles of treatment for patients with epiglottic abscess includes immediate airway management, direct laryngoscopy with incision and drainage of the abscess and intravenous administration of broad-spectrum antibiotics. Immediate tracheostomy may be required to relieve stridor. This kind of abscess may be associated with airway manipulation and laryngeal malignancies.[4] No such history of manipulation was found in this case.

A broad-spectrum antibiotic is started initially due to its polymicrobial aetiology.[5] This was changed to targeted antibiotic therapy as per culture and sensitivity report. In our case, biopsy was sent from laryngeal tissue which showed inflammatory infiltrate and no evidence of malignancy. Diagnostic endoscopy helps in early diagnosis of disease, extent, laryngeal inlet visualization and progress after treatment.[6] Ideal modality of imaging is still controversial.[7] Computerized tomography scan provides assessment of laryngeal anatomy, intralaryngeal and extra laryngeal collection, extent, confirmation of diseases and planning of treatment modality. Pus drained under direct laryngoscopic control under general anaesthesia is a safe and better option. Some literature describes lateral thyrotomy approach for paraglottic space disease.[8] However, it has more chance of surgical infection and scar. There was no need for external drainage of pus in this case. The complication of such infection like mediastinitis and necrotizing fasciitis should be kept in mind which has a bad prognosis.[9]

CONCLUSION

Acute laryngeal abscess is a possibility even in the modern antibiotic era. It has a higher risk among immunocompromised patients. Prompt institution of antibiotic therapy along with airway management, CT imaging and endoscopic drainage of pus is the mainstay of treatment.

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