Asian Pac. J. Health Sci., 2014; 1(4S):1-5 e-ISSN: 2349-0659, p-ISSN: 2350-0964

Tuberculous retropharyngeal abscess presenting with dysphagia in a young adult male already on anti-tubercular therapy

Kaustuv Das Biswas[1]* Soumya Ghatak[2], Sirshak Dutta[3], Rahul Sarkar[4], Pranay Agarwal[4], Ramanuj Sinha[5]

[1]RMO cum Clinical Tutor, Department of Otolaryngology, IPGMER & SSKM Hospital, Kolkata, India
[2]RMO cum Clinical Tutor, Department of Otolaryngology, R.G.Kar Medical College & Hospital, Kolkata, India
[3]RMO cum Clinical Tutor, Department of Otolaryngology, Calcutta Medical College & Hospital, Kolkata, India
[4]Junior Resident, Department of Otolaryngology, R.G.Kar Medical College & Hospital, Kolkata, India
[5]Professor & HOD, Department of Otolaryngology, Calcutta Medical College & Hospital, Kolkata, India

Received: 18-11-2014 / Revised: 18-12-2014 / Accepted: 20-12-2014

ABSTRACT

Tuberculosis is known to affect almost every organ in the body, but its manifestations in the head and neck region are quite rare. Retropharyngeal abscess (RPA) caused by tuberculosis is an uncommon manifestation of extra-pulmonary tuberculosis within the head and neck. Here we present an unusual case of tuberculosis retropharyngeal abscess causing dysphagia in a young adult male already on anti-tubercular therapy, with neither any evidence of tuberculosis involvement of cervical spine nor any pulmonary tuberculosis lesion.

Keywords: Tuberculosis

Introduction

Tuberculosis is known to affect almost every organ in the body, but its manifestations in the head and neck region are quite rare[1].Tuberculosis of head & neck area, excluding laryngeal tuberculosis is rare & constitutes only 2-6% of extrapulmonary tuberculosis & 0.1-1% of all forms of tuberculosis[2,3]. Retropharyngeal abscess is a rare presentation, even in the presence of extensive pulmonary tuberculosis[4].Retropharyngeal abscess (RPA) caused by tuberculosis is an uncommon manifestation of extra-pulmonary tuberculosis within the head and neck[5].In the case of tuberculosis retropharyngeal abscess it is usually due to spinal tuberculosis[6]. Here we present an unusual case of tuberculosis retropharyngeal abscess causing dysphagia in a young adult male already on anti-tubercular therapy, with neither any evidence of tuberculosis involvement of cervical spine nor any pulmonary tuberculosis lesion.

**Correspondence*
Dr. Kaustuv Das Biswas
Avishikta-1, Flat no:2B-402, 369/1, Purbachal, Kalitala road, P.O.- Haltu, Kolkata-700078. West Bengal, India
E-mail: dr.kaustuv.82@gmail.com

Case report

A 22 years old male patient presented to the Otorhinolaryngology (ENT) OPD of R.G. Kar Medical College & Hospital, Kolkata, India with difficulty in swallowing with progressive swelling on the right side of neck for last 25 days. There was neither history of any acute onset pain in throat or any trauma to throat or neck by any foreign body nor any history of endoscopy or instrumentation of throat. On examination the patient was of average built with mild fever. Oropharyngeal examination revealed a huge globular cystic swelling, occupying whole of the oropharynx, apparently arising from posterior pharyngeal wall behind the right tonsillar area, covered by congested mucosa (figure 1). The swelling was fluctuant to touch, tender on palpation. Laryngeal examination could not be performed because of the huge swelling on posterior pharyngeal wall. The patient also had right upper deep cervical (level II,III) lymphadenopathy, which was tender, fixed to surrounding structures with central area of fluctuation & an overlying scar of healed sinus (figure 2). There was no tenderness over cervical spine. On scrutinising

past history patient was found to have bilateral cervical lymphadenitis, developed 10 months back, treated conservatively with antibiotics, not resolved & on aspiration pus was obtained which on Ziehl Neelsen staining revealed 2-4 bacilli per 100 oil immersion film and fine needle aspiration cytology from right cervical lymph node revealed granulomatous lymphadenitis. But patient's chest skiagram revealed no evidence of pulmonary tuberculosis & sputum was also negative for acid fast bacilli. Thus the patient was stamped as a case of extrapulmonary tuberculosis and 4 drug anti-tubercular regimen with Isoniazid (600mg), Rifampicin(450mg), Pyrazinamide (1500mg), Ethambutol (1200mg) thrice weekly,was started 8 months back along-with injection Streptomycin (750mg) which was continued as once daily injection for 90 days. The patient initially responded with resolution of left cervical lymphadenitis but right sided cervical lymphadenitis persisted & patient developed difficulty in swallowing insidiously. The 4 drug anti-tubercular regimen was continued till date of presentation at ENT OPD. The patient's retroviral serology was non reactive. Rest of blood parameters were within normal limits.

The patient was admitted in ENT ward & CT scan neck (plain & contrast) was performed which revealed a huge triloculated irregularly marginated right retropharyngeal cystic space occupying lesion (SOL), 68x 63x 29 mm in size, extending to right perivertebral space. (figure 3)The SOL had thick enhancing wall, enhancing septae with internal calcification. (figure 4) The lesion compressed oropharynx & upper part of laryngopharynx. Right carotid sheath was displaced anterolaterally. Surprisingly skiagram of neck antero-posterior & lateral view taken simultaneously revealed no evidence of cervical vertebral erosion or tubercular involvement (figure 5). The chest skiagram was still free from any tuberculous lesion (figure 6). The patient was put on broad spectrum antibiotics intravenously along with continuation of the anti-tubercular regimen. Because of the huge retropharyngeal abscess causing discomfort & dysphagia to the patient, we performed wide bore needle aspiration of the abscess trans-orally under all aseptic precautions & under local anaesthesia (10% xylocaine spray). There was no need of tracheostomy as the patient did not suffer from any respiratory distress. About 20 ml of thick yellowish pus was collected & the pus was sent for microbiological study which on routine culture revealed no growth, gram stain revealed fair number of pus cells & no microorganisms but on AFB stain an occasional acid fast bacilli were seen, some were intact & some were segmented. After 2 days we drained the abscess, which was still persistent, trans-orally under local anaesthesia & about 30 ml of pus was drained during this sitting. The drainage relieved symptoms of the patient & in consultation with Dept. of Respiratory Medicine we continued 3 drug anti-tubercular regimen (i.e. Rifampicin 450mg, Isoniazid 300mg, Pyrazinamide 1500 mg thrice a week) for the patient. The patient showed considerable improvement at the time of discharge with disappearance of posterior pharyngeal wall swelling as well as resolution of right cervical lymphadenitis along- with relief of dysphagia at the time of discharge & had no recurrence of symptoms till date.

Figure 1: Clinical photograph showing right retropharyngeal abscess

Figure 2: Clinical photograph showing right cervical lymphadenopathy & overlying scar of healed sinus

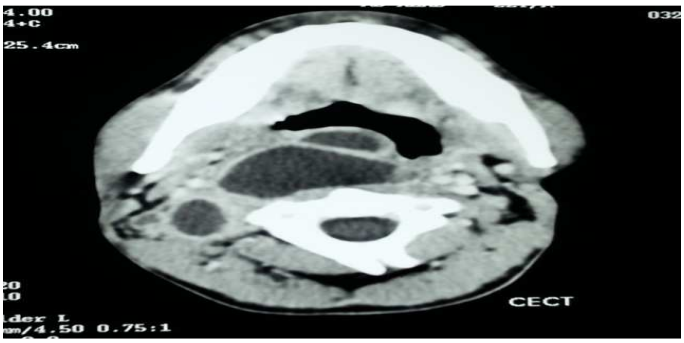

Figure 3: CT scan neck showing triloculated right retropharyngeal cystic SOL, extending to right perivertebral space

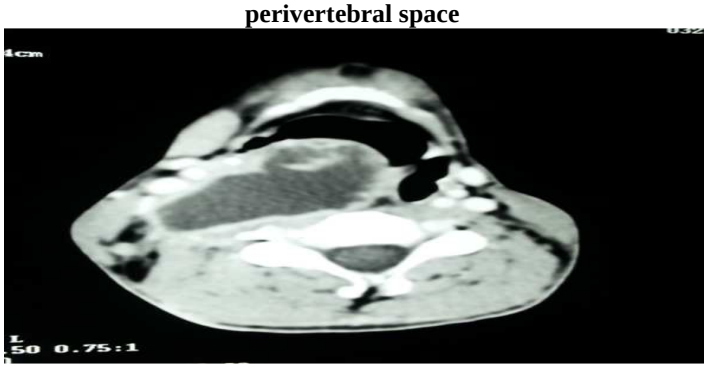

Figure 4: SOL with thick enhancing wall, enhancing septae with internal calcification.

Figure 5: Skiagram of neck antero-posterior &lateral view without any evidence of cervical vertebral erosion or tubercular involvemen

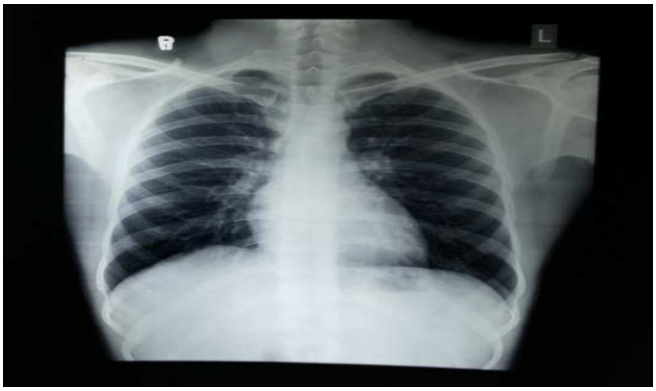

Figure 6: The chest skiagram, free from any tuberculous lesion

Discussion

The retropharyngeal space is posterior to the pharynx. It is bounded anteriorly by the buccopharyngeal fascia, posteriorly by the prevertebral fascia and laterally by the carotid sheaths. It extends superiorly to the base of the skull and inferiorly to the mediastinum and frequently serves as a conduit for spread of disease from the neck into the chest[7].It contains loose areolar tissue and a group of lymph nodes. Historically, retropharyngeal space abscesses have largely been considered to be a disease of infancy, usually resulting from abscess of lymph nodes draining infection of ear, nose or throat[8].Retropharyngeal abscess in adults is often pyogenic and usually secondary to pharyngeal or oesophageal perforation or sepsis in the throat or sinuses, after a penetrating injury, oral endo-tracheal intubation or endoscopic procedures or when the posterior pharyngeal wall is pierced by a foreign body[8].Retropharyngeal tuberculous abscess is a rare presentation of the disease as evidenced by a study of 117 patients with head and neck tuberculosis showed only 1 case of retropharyngeal abscess[9].A tuberculous retropharyngeal abscess in adults is usually secondary to tuberculous involvement of cervical spine[10].In rare cases it occurs as a result of lymphatic spread to a persistent retropharyngeal lymph node. Occasionally the abscess may be due to haematogenous spread from pulmonary tuberculosis or tuberculosis elsewhere[11,12].In our case, the retropharyngeal abscess was probably caused by lymphatic spread of tuberculosis from cervical lymphadenitis already present for last 10 months, to the persistent lymph node in the retropharyngeal space, which usually disappears after the age of 4-5 years[13]. But the remarkable point was that there were neither evidence of pulmonary tuberculosis nor any cervical spinal involvement. The case is unusual & rare as no other case of tuberculous retropharyngeal abscess with neither any evidence of cervical spinal nor pulmonary involvement has been found to be reported in English literature. More surprisingly the patient had the tubercular retropharyngeal abscess as a newly appearing lesion even after getting eight months of anti-tubercular drugs which reveals that the tubercle bacilli were still active & able to cause lesion in the patient.Drainage of retropharyngeal abscess, both transorally as well as by external route have been proved to be safe in literature.[14] Transoral drainage of retropharyngeal abscess is an established mode of treatment[15,16]So our case was initially treated with transoral wide bore needle aspiration under local anaesthesia. Needle aspiration has several advantages. It may be repeated if required & can be performed under local anaesthesia[12].Furthermore, needle aspiration may be used to exclude other differential diagnoses such as a malignant tumour presenting clinico-radiologically as a prevertebral abscess[12]. It has been mentioned that in cases where pus cannot be successfully aspirated, surgical drainage may be more appropriate[12].In the case under consideration the abscess was persistent & transoral drainage of the abscess under local anaesthesia was required to drain the pus completely & effectively. Surgery may be avoided altogether in selected cases, as massive cold abscesses have been reported to have disappeared on medical treatment alone[17].

It has to be borne in mind that aggressive treatment with antitubercular drugs and early surgical intervention is necessary to prevent further

complications such as mediastinitis and involvement of the great vessels[18].

Conclusion

Retropharyngeal abscesses are rare in adults and constitute a serious life threatening emergency if not diagnosed early & treated aggressively. A possibility of tuberculous aetiology should be borne in mind when the infection does not respond to routine antimicrobial treatment. There may be clinical and radiological features suggestive of tuberculosis but rarely these may be absent altogether. Another important point to be noted cautiously that any tubercular lesion can develop even in patients already on anti-tubercualr medication & so a strong quotient of suspicion should be maintained. Management is based on antibiotics and drainage along with antituberculosis drugs. Needle aspiration is an effective alternative treatment to surgical drainage.

References

1. Christoforidou A, Metallidis S, Kollaras P, Agathangelidis A, Nikolaidis P, Vital V, Markou K. Tuberculous retropharyngeal abscess as a cause of oropharyngeal dysphagia. *Am J Otolaryngol*. 2012 Mar-Apr;33(2):272-4.
2. Alvarez S, McCabe W. Extrapulmonary tubrerculosis revisited: a review of experience at Boston City & other hospitals. *Medicine* (Balt).1984; 63(1): 25-55.
3. Weir M, Thosnton G. Extrapulmonary tuberculosis. *Am J Med*. 1985; 79: 467-76.
4. Melchor Diaz MA, Domingo Carrasco C, Monge Jodra R, Marino Espuelas J, Ontanon Martin M. Tuberculous retropharyngeal abscess in an HIV patient: Report of a case. *Acta otorhinolaryngol Esp*. 1993; 44: 467-470.
5. PatelAB, HinML.Tuberculous retropharyngeal abscess presenting with symptoms of obstructive sleep apnea. *Eur Arch Otorhinolaryngol.* 2013 Jan; 270(1):371-4.
6. Kooli H, Marreckchi M, Tiss M, Koli M, Hajri H, Najeh D et al. Cold parapharyngeal abscess in spondylodiscitis. *Presse Med*. 2001; 30(1):19.
7. Lafitte F, Martin-Duverneuil N, Brunet E, et al. Rhinopharynx et espaces profonds de la face: anatomie et applications a la pathologie. *J Neuroradiol*.1997; 24(2): 98-107.
8. Michael M Paparella, Donald A Shumrick. Otolaryngology. 3rd ed. Philadelphia: W.B. Sunders Company.1991: 2558-2559.
9. Fernandez-Ponjoan E. Practical considerations from the study of one thousand patients with tuberculosis of the upper respiratory tract. *Vida Nueva*. 1943;51:146-154.
10. Ventura G, Cauda R, Paliotta VF, Colosimo C, Lucia MB. Pott's disease of the cervico-occipital junction in an AIDS patient. *Tuber Lung Dis*.1996; 77: 188-190.
11. Rice DH, Dimcheff DG, Benz R, Tsang AV. Retropharyngeal abscess caused by atypical Mycobacterium. *Arch Otolaryngol*. 1977; 103(11): 681.
12. Singh J, Velankar H, Shinde D, Chordia N, Budhwani S. Retropharyngeal cold abscess without Pott's spine. *South African Journal of Surgery*. November 2012; Vol50 (4): 137-139.
13. Marques PM, Spratley JE, Leal LM, Cardoso E, Santos M. Parapharyngeal abscess in children: five year retrospective study. *Braz J Otorhinolaryngol*. 2009; 75(6):826-830.
14. Raj TB, Zarod AP. Acute non-tuberculous retropharyngeal abscess in adults: Case reports of three patients. *J Laryngol Otol*.1985; 99(12):1297-1300.
15. Benitez P, Guilemany JM, Alobid I Berenguer J, Mullol J. Transoral approach to drain streptococcus pneumoniae spinal epidural abscess in an HIV-infected adult. *Acta Otolaryngol*. 2004; 124: 863-6.
16. Dhar MC, Chaudhari S, Pain S, Halder U, Chakraborty A, Basu K. Retropharyngeal tuberculous abscess along with alcoholic hepatitis and pulmonary tuberculosis. *Indian J Tuberc.* 2002; 49: 159-160.
17. Unal O, Kayan M, Akpinar F, Cankaya H, Akdeniz N. MRI demonstration of cervical spondylodiscitis and distal full-length bilateral paraspinal cold abscesses successfully treated by drug regimen only. *Skeletal Radiol.* 2004; 33:741-743.
18. Meher R, Jain A, Sabharwal A, Gupta B, Singh I, Agarwal AK. Deep neck abscess: a prospective study of 54 cases. *J laryngol Otol*. 2005; 119: 299-302.

Source of Support: NIL
Conflict of Interest: None