RETROPHARYNGEAL ABSCESS: CASE REPORTS

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SUMMARY

This paper deals with our experience of two cases of retropharyngeal abscess due to foreign body. A brief account of the anatomy, pathology, complications and treatment of this condition is given.

INTRODUCTION

Retropharyngeal abscess is a rare, deep, space infection of the neck. Two cases were seen at the University Hospital Kuala Lumpur, in two successive months in early 1984. An account of the management is discussed.

CASE HISTORY

Case 1

A 48-year-old female, Chinese presented with a history of swallowing a fish bone accidentally four days before. She complained of painful dysphagia, neck stiffness, chills with rigours of one day duration. On examination, she was febrile with neck stiffness. No other abnormalities were detected on systemic examinations. Indirect laryngoscopy showed a fish bone stuck in the posterior pharyngeal which was bulging forward.

Investigations showed that white blood count (wbc) was 16,500. Soft tissue neck X-rays (lateral) revealed an increase of prevertebral soft tissue shadows, suggestive of an abscess, which was confirmed by a CT scan. Other blood and radiological examinations done were normal.

The fish bone was removed under local anaesthesia and the patient was started on intravenous flagyl (500 mg every eight hours) and Gentamicin (80 mg every eight hours). The improvement of her condition was confirmed by a decrease in size of the prevertebral shadows in the serial soft tissue X-rays of the neck. She was discharged well, two weeks after admission.

Case 2

A 58-year-old diabetic Indian, male was referred with painful dysphagia, chills with rigours, three days after swallowing a chicken bone. On examination, he was febrile with tenderness over the left upper sternomastoid region. Other systemic examinations were normal. Indirect laryngoscopy showed a pooling of saliva in the hypopharynx.

Investigations showed that white blood count (wbc) was 15,000. His random blood sugar level (RBSL) was 13.2 mmol/l. Other blood examinations were normal. Soft tissue neck X-rays (lateral) showed

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a widening of the prevertebral shadow with evidence of gaseous lucencies (Fig. 1). Chest X-rays taken showed a widening of the superior mediastinum.

A piece of chicken bone 2 cm in length, was found impacted at 16 cm and this was removed by an emergency oesophagoscopy. Post-operatively, he was commenced on an intravenous course of flagyl (500 mg every eight hours) and Gentamicin (80 mg every eight hours). However, he continued to have spiking temperatures. The tender region over his left neck persisted and was extending downwards. A CT scan showed the presence of a retropharyngeal abscess extending into the superior mediastinum (Fig. 2). The abscess was drained surgically *via* a left cervical approach. The pus drained grew *Escherichia coli* and *Proteus spp.* sensitive to Gentamicin. He had stormy post-operative periods punctuated by persisting, purulent discharge from the drainage site and uncontrolled diabetes aggravated by the infection. However, the diabetes was finally brought under control with regulated doses of soluble insulin. With the diabetes controlled, the infection subsided eventually and the purulent discharge ceased. He was discharged well, six weeks after admission.

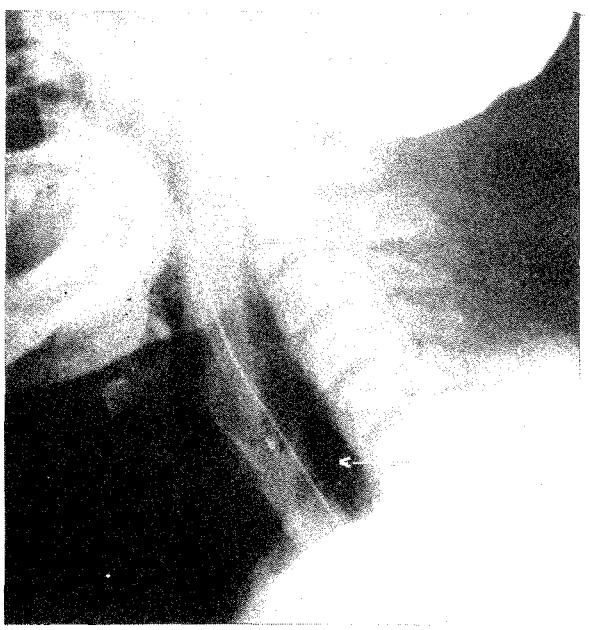

Fig. 1 Lateral soft tissue X-ray neck showing gaseous lucencies (arrowed). A nasogastric tube was inserted for feeding purpose.

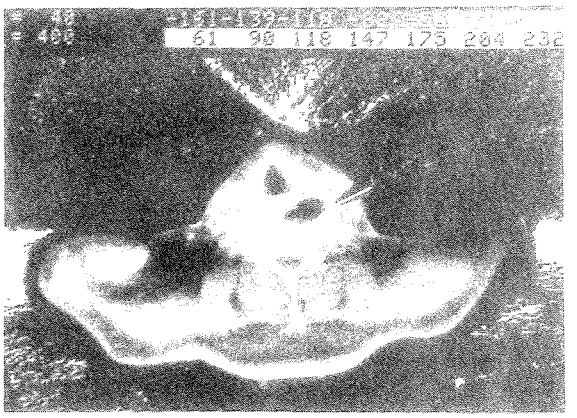

Fig. 2 CT scan showing retropharyngeal abscess cavity (arrowed).

DISCUSSION

Retropharyngeal abscess is a relatively rare, deep space abscess of the retropharyngeal space. In health, this space is a potential space containing loose connective tissue lying between the prevertebral muscles/fascia posteriorly and pharyngeal muscles/fascia anteriorly. It allows the pharynx to glide up and down over the prevertebral muscles during the act of swallowing. This space extends from the base of the skull to the superior mediastinum as far as the bifurcation of the trachea.[1] Laterally, it communicates with the parapharyngeal space (one on each side) which contains the great neck vessels, and the 9th, 10th, 11th, 12th cranial nerves. Two groups of lymph nodes (Nodes of Rouviere) are found in the space. They receive the rich lymphatic drainage from the adjacent muscles, nasopharynx, middle ear and eustachian tubes. They are found in great abundance in children; but in older children and adults, the lymph nodes gradually become atrophied.

Two varieties of retropharyngeal abscesses are described, i.e., acute and chronic. The acute variety usually occurs in younger children following URTI or ENT infections. In the adults, it can also occur following regional trauma such as foreign bodies ingestation, endoscopy and external penetrating injuries. The chronic varieties usually occur in the

older children and adults and is usually due to tuberculosis of the cervical spine.

Retropharyngeal abscess, if it is not drained, will rupture spontaneously into the pharynx causing asphyxiation of the child. Airway obstruction may also occur due to anterior displacement of the pharynx by the abscess. Other pulmonary complications include aspiration pneumonia, empyema and mediastinitis. The retropharyngeal abscess may extend laterally into the parapharyngeal space containing the great neck vessels (as shown in the second case). The internal jugular vein may be thrombosed or the internal carotid artery can be eroded resulting in a fatal haemorrhage. Mortality as high as 20–40% has been reported in the rupture of a major neck artery due to neck abscess regardless of treatment.[2]

The treatment of this condition is with appropriate antibiotics based on culture and sensitivity studies. Surgical drainage is required in cases not responding to antibiotics. Resolution of the abscess is possible in 10–20% of cases without surgical drainage, if appropriate antibiotics are given early.[3] In cases where drainage is required, a localised abscess without respiratory obstruction can be drained by direct incision of the posterial pharyngeal in a head-down position. In most cases, the abscess is best drained *via* cervical approach either anterior or posterior to the sternomastoid muscle. If there is airway obstruction, a preceding tracheostomy under local anaesthesia is mandatory.

Both our cases were successfully treated. In case one, the patient responded well to the antibiotics given. Surgical intervention was not required. In the second case, the patient had a stormy recovery period. This can be attributed to an impaired defence mechanism as a result of the uncontrolled diabetes. The abscess was successfully drained *via* an anterior cervical approach.

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