UNUSUAL OSSIFICATION OF LARYNGEAL CARTILAGES

(A Case Report)

Maj AK MEHTA*, Brig PC CHAMYAL[†]

MJAFI 1996; 52 : 126-127

KEY WORDS : Calcification; Laryngeal cartilages.

Introduction

Ossification of laryngeal cartilages can occur anytime after the third decade. There is great variation in age of onset and extent of ossification. Arytenoid and tritaceous cartilages may rarely be ossified alone and may be mistaken for a swallowed foreign body [1]. Here we report one such rare case where ossification of the arytenoid cartilage was mistaken for a foreign body.

CASE REPORT

A 38-year-old female patient presented with complaints of foreign body sensation in the throat alongwith painful swallowing of sudden onset since one day. There was no history of vomiting, regurgitation, cough, or respiratory distress. She attributed her symptoms to a swallowed meat bone. On examination her vital parameters were normal. Examination of the throat including indirect laryngoscopy did not reveal any foreign body, mucosal abrasion, or pooling of saliva in the pyriform fossae. There was no swelling or tenderness over the neck. Because of history of swallowing a meat bone radiographic examination of neck and chest was done. Radiogram of the neck (lateral view) showed a radiopaque shadow in the aerodigestive tract just above the cricoid cartilage (Fig 1). Oesophagoscopy done under GA did not show any foreign body. A lateral oblique radiogram of neck was taken with the suspicion that the radiopaque shadow may be ossified arytenoid cartilage. This view clearly demonstrated both arytenoid cartilages as separate triangular opacities superior to the cricoid cartilage (Fig 2). Having ruled out presence of any foreign body the patient was not offered any treatment and the initial symptoms disappeared in the next two days.

Discussion

The larynx is situated in the midline of the neck opposite to third to sixth cervical vertebrae. It is composed of a framework of cartilages connected by ligaments and membranes and moved by mus-

cles. The cartilages may be paired or unpaired. Unpaired cartilages are the thyroid cartilage, cricoid cartilage and the epiglottis. Paired cartilages are the arytenoid, corniculate, cuneiform, and tritaceous cartilages.

Ossification commonly occurs in one or more laryngeal cartilages, although variations exist in the age of onset and extent. Usually ossification occurs first in the thyroid cartilage at about 30 years of age and is complete by 65 years. Cricoid cartilage ossifies from behind forward and rarely

Fig. 1: Radiogram neck (lateral view) showing radiopaque shadow.

*Reader; [†]Formerly Prof and Head; Department of ENT, AFMC, Pune - 411040.

Fig. 2 : Radiogram neck (lateral oblique view) showing ossified arytenoid cartilages.

ossification occurs in the epiglottis, cricothyroid ligament, and upper part of the stylohyoid ligament.

Rarely the arytenoids may ossify in the absence of ossification in other laryngeal cartilages and present as dense triangular opacities. If superimposed they should not be mistaken for a swallowed foreign body [2]. In the present case a positive

history of foreign body ingestion with radiopaque shadow on lateral radiography of neck suggested the presence of a foreign body. However, normal oesophagoscopy and lateral oblique radiograph of neck which demonstrated two separate arytenoid cartilages helped in establishing a correct diagnosis.

In certain patients ossified tritaceous cartilages, irregular and incomplete ossification of thyroid and cricoid cartilages can simulate a foreign body. The corniculate and cuneiform cartilages are unlikely to be mistaken because they lie anteriorly [3].

Normal calcification of thyroid cartilage may occasionally appear in older children but as a rule the only cartilage calcified in younger children is thyroid bone. Any other radiopaque structure is usually abnormal [4].

REFERENCES

1. Wilhani BY, Patricia H. Radiographic anatomy of ear, nose and throat. In: Ballantyne J, Groves J, editors. Scott Browns Diseases of Ear, Nose and Throat, 4th edn, London : Butterworths, 1979, Vol 1 : 551.
2. Sulton D. Thyroid cartilages. Text book of radiology and Imaging. 3rd edn, New York: The Macmillan Company 1980 : 957.
3. Mincoff LR, Seeman WB. Normal anatomy of larynx and pharynx and the differential diagnosis of foreign body. *Semin Roentgenol* 1974; 9 : 267-70.
4. Glazer H, Siegel M. Radiology of larynx. In : Otolaryngology, Head and Neck Surgery, Cummings CW, editor. 1986, 98 : 1849.