Calcification of the epiglottis

A 67-year-old male underwent CT examination of the neck for preoperative mapping of a thyroid goitre. His symptoms were of intermittent voice loss.

Medical history: No hypertension. Osteoarthritis. Recurrent renal colic. No granulomatous disease or previous radiotherapy. Surgical history: Mechanical aortic prosthesis; left inguinal hernia.

As an incidental finding, partial calcification of the epiglottis was noted involving the lower two-thirds of this structure (the free portion shows no calcification).

Discussion:

Calcification of laryngeal cartilages is described in numerous anatomy texts which usually state that the epiglottis, cuneiform and corniculate cartilages almost never calcify, due to their elastic properties [1, 2]. This rare and interesting case demonstrates epiglottic cartilage calcification with no known underlying cause. Previous literature has reported cases of calcification secondary to treatment with radiotherapy or in patients with granulomatous disease [2, 3].

There are three unpaired (thyroid, epiglottis and cricoid) and three paired (arytenoid, cuneiform and corniculate) laryngeal cartilages. The epiglottis and the cartilages of Wrisberg (such as the cuneiform and the corniculate cartilages) are made of yellow elastic fibro cartilage and may calcify with age [2,3]. Most of the consulted sources indicate that the epiglottic cartilage does not calcify, however some state that it does [5].

During swallowing, the epiglottis works to protect the entrance of the airway, acting as a cover across the laryngeal inlet. Calcification could alter its mechanical properties and favour aspiration leading to a significant risk of pneumonia in the elderly [2]. Furthermore, the presence of lesions (such as a Zenker diverticulum) can cause a
weak peristaltic wave leading to hypomotility of the epiglottis which may predispose it to calcify [4].

Concerning treatment, this kind of calcification does not require any unless there are respiratory complications [4]. **Differential Diagnosis List:** Diffuse calcification of the epiglottis., Calcification secondary to granulomatous disease., Calcification secondary to radiotherapy., Calcified tumours of the Larynx.

**Final Diagnosis:** Diffuse calcification of the epiglottis.

**References:**


G.M. Ardran; M.D.; D.M.R (1965) Calcification of the epiglottis. BJR 38, 592-595 (PMID:14326460)

Description: Discontinuous calcification of epiglottic cartilage is evident. Origin: Department of Radiology, Hospital Universitario Virgen de la Arrixaca, Murcia (Spain).
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