Find

avec l'aide de FreeFind

mise à jour du
6 mai 2004
Dentomaxillofacial
Radiology
1997; 26; 249-251

Calcified stylohyoid ligament: unusual pressure symptoms

Fanibunda K, Lovelock DJ
Dental scholl, Framlington, UK

Bâillements et stomatologie

Case Report : A 42-year-old Caucasian male was referred complaining of discomfort and swelling in the right submandibular region which intermittently increased in size and subsided over several days, but was not related to mealtimes. **A sharp pain was also present on yawning** and sudden movement of the head over a period of one year. There was no relevant medical history. On examination, a large bony hard swelling was palpable over the whole of the right submandibular region.

A panoramic radiograph showed that the right stylohyoid ligament had calcified in one piece from the base of the skuil to within 2 mm of the lesser cornu of the hyoid borie. Its width was irregular ranging from 7 to 21 mm and the hyoid end widened out with a concave surface, giving an appearance analagous to the epiphysis of a limb bone. The left stylohyoid ligament was also calcified, but to a lesser degree. A retained root was present in the left lower first molar region associated with a radicular cyst 0.75 cm in diameter.

Discomfort was felt in the posterior region of the floor of the mouth on sucking a Vitamin C tablet and therefore a sialogram of the right submandibular gland was performed. There was no duct dilation, but the gland and the proximal end of the main duct were displaced laterally by the calcified stylohyoid ligament. Complete clearance of contrast in less than 3 min after removal of the catheter demonstrated excellent glandular function.

A CT scan was undertaken to exclude other pathology. The enlarged styloid process was shown to be intimately related to the medial surface of the right submandibular salivary gland and the lateral displacement of the gland confirmed. A 3-D reconstruction of this reaion showed the gross enlargement of the right styloid process. In spite of this enlargement, the patient did not feel that the intermittent nature of the discomfort was sufficient to warrant surgical interference and he has therefore been kept under review. The left lower first molar root together with the associated radicular cyst was removed under local anaesthesia.

Discussion : The styloid process and stylohoid ligament are remnants of the second pharyngeal arch cartilage. The unossified cartilage disappears and its perichondrium persists as the ligament. Hence the styloid process can elongate to a variable length, potentially impinging on adjacent structures, causing a variety of symptoms. The dissimilarity in the diameter and length of the right and left stylohyoid ligaments in the case illustrated is difficult to explain. Statistics show that between 2% and 4% of the general population present radiographic evidence of mineralisation of the stylohyoid compleX2 but the majority of these arc reported to bc symptomless. The unusual presenting féatures of the right stylohyoid ligament in this case appear to bc dictated more by the direction of the enlargement than its size.

Since Eaglel first reported this condition, a variety of associated clinical features have been listed of which pain, migranous headache, a foreign body sensation in the throat and difficulty in swallowing have been commonly described. Local symptoms of pain may be present in the region of the ear, temporomandibular joint or in the neck, especially on turning the head. Originally, Eagle described two distinct syndromes, the classic styloid and the carotid artery syndromes. The classic styloid process syndrome was thought to manifest predominantly following tonsillectomy and rarely prior to it. The explanation given was that after a tonsillectomy, discomfort may occur due to stretching or

compression of nerve endings of V, VIII, IX or X cranial nerves because of fibrous tissue formation in the tonsillar fossa near the elongated styloid process. The carotid artery syndrome which is due to pressure of the elongated styloid process on the sympathetic nervous tissue in the walls of the carotid arteries, is not dependant on tonsillectomy.

haut de page

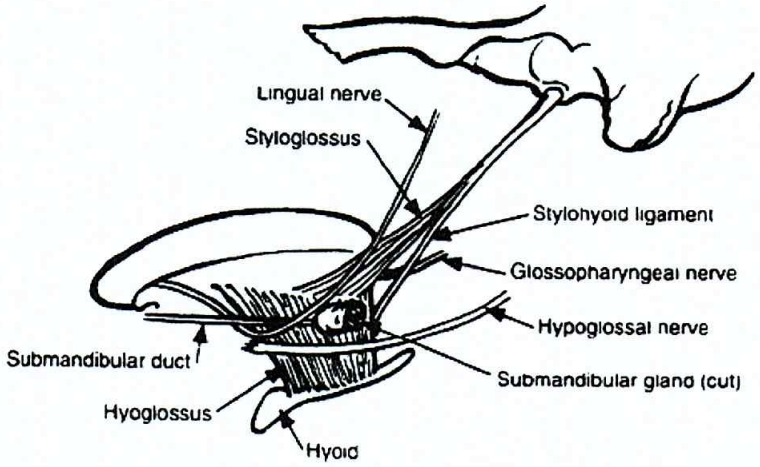

Diagram showing the relationship of the stylohyoid ligament to the submandibular gland

An appreciation of the anatomy in this region shows that the medial surface of the submandibular gland in its posterior part is directly related to the stylohyoid ligament. Therefore an enlarged stylohyoid apparatus could cause pressure symptoms resulting in intermittent obstruction of the salivary gland system. **Although the mechanism of yawning is not fully understood, it is generally known that the stylohyoid apparatus bears an intimate relationship to the structures of the tongue, the lateral wall of the oropharynx and larynx that are involved in the process of yawning**. The diagnosis was confirmed by the presence of an acute swelling on sucking a Vitamin C tablet, the presence of a grossly enlarged and calcified stylohyoid ligament on routine radiography, absence of intraglandular pathology on the sialogram and the displacement of the salivary gland by the stylohyoid apparatus as shown on both sialography and CT. When discussing the differential diagnosis of submandibular salivary gland obstruction and **pain on yawning**, an enlarged stylohyoid ligament should be considered as a contributing cause.

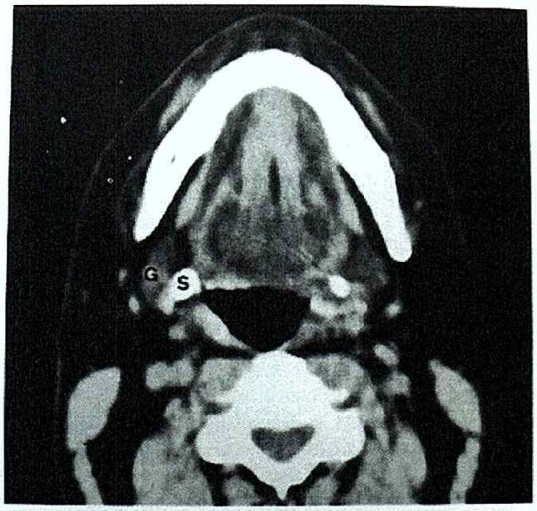

Figure 3 CT scan showing lateral displacement of right submandibular gland (G) by the calcified stylohyoid ligament (S)