Giant Cervical Osteophytes Their Significance in ENT Practice

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Foresteir's disease or Diffuse idiopathic skeletal hyperostosis (DISH) involving the cervical vertebrae in two patients is being presented as an uncommon cause of snoring and dysphagia. The radiological features of the giant osteophytes involving the cervical vertebrae are detected on routine skiagrams of the neck. A review of literature over ten years showed no such record of such a lesion occurring in C1-C2 vertebrae, whereas the occurrence in the lower cervical vertebrae is occasionally seen causing dysphagia. The relative merits of the surgical approaches are discussed.

Key Words : Foresteir's Disease, Diffuse Idiopathic Skeletal Hyperostosis, Ankylosing Hyperostosis, Giant Cervical Osteophyte.

Case I

A thirty year old male presented with complaints of simple snoring for the past 3 years. He had crescendo decrescendo type of breathing during this period. He did not complain of dysphagia, neck pain or limitation of neck movements.

Examination revealed a hemispherical mass in the midline of the posterior pharyngeal wall measuring 2 cms x 2 cms in diameter extending from the level of the soft palate to the tip of the epiglottis, and laterally to the level of the posterior tonsillar pillar on either side. Mucous membrane over the swelling appeared healthy and on palpation revealed a bony hard, non tender smooth immobile mass. There was no cervical lymphadenopathy. On indirect laryngoscopy the mass was seen partially occluding the view of the laryngeal air way and both the vocal cords moved normally. Skiagrams of the cervical spine

revealed a bridging osteophyte over the anterior aspect of C1 and C2 vertebrae (fig 1) with no evidence of sclerosis or erosion. The intervertebral space appeared normal. Ossification of the ligamentum nuchae was noted (fig.1). Skiagrams of the lumbosacral spine and the dorsal spine were normal. Haematological investigations viz. Serum calcium, Phosphorous, Alkaline Phosphatase and proteins were not

Fig. 1

contributory. A mini sleep study (ECG monitoring, X-ray chest and pulse oximetry) was done during sleep, were not contributory. Polysomnography

studies were not performed due to non availability.

Under general anaesthesia, through orotracheal intubation, the patient was kept in Rose's position. The mouth was opened after applying Boyle Davis mouth gag with Doughty's tongue blade. The palate was retracted using rubber catheters passed through the nostrils. The swelling on the posterior pharyngeal wall was exposed. A linear vertical 2 cm incision was made over the swelling and the mass was exposed by blunt dissection. The mass appeared whitish in colour and bony hard to palpation. The size of the mass was reduced as much as possible, considering the locations, by using a motor driven burr. The wound was closed in layers with 0000 Vicryl sutures after ensuring complete hemostasis. Post operative recovery was uneventful. Review skiagrams showed marked reduction in the projecting mass (fig 2) but not completely.

Fig. 2

Case II

73 year old Mr. V. R. a known case of myocardial infarction consulted us for progressive dysphagia for solids of 7 year duration. He had consulted a few institutions where symptomatic treatment was offered to him, without any relief. He was having an X ray of the cervical spine which showed massive osteophytic changes in the C3, C4, C5 and C6 vertebrae (fig 3).

Fig. 3

He also complained of stiff neck and pain in the spine and had limitation of cervical and lumbar spinal movements. A barium swallow (fig 6) was taken and the patient was referred to a gastroenterologist for flexible endoscopy which could not be negotiated and hence the procedure was abandoned. We reviewed the case with repeat X ray of the cervical spine, lumbar spine (fig 5) and CT scan which revealed the persistent ankylosing giant hyperostosis, (osteophytes). We then came to a conclusion that it was the pressure effect of the giant osteophytes in the C3, C4, C5 and C6 vertebral region on the upper oesophagus that caused dysphagia. We also consulted a spine surgeon and in collaboration, we subjected the patient for excision of osteophyte by left anterolateral cervical approach.

Under general anaesthesia patient was put in supine position. Nasogastric tube was passed as a guide and for postoperative feeding. An incision was made in the anterior border of the

sternocleidomastoid from the level of hyoid bone, down up to, one inch above the medial end of the clavicle. By blunt dissection tissues separated. Carotid vessels were pushed laterally. The

Fig. 4

Longissimus capitis muscle on the vertebral body was separated and the giant osteophyte in the anterior part of the body of the cervical vertebra

Fig. 5

Fig. 6

(C3 to C6) was exposed. With an osteotome the giant osteophyte was removed in flakes and with the help of image intensifier the projecting irregularities were ironed out as far as possible, taking care not to injure any neighbouring structures. The wound was closed in layers with a drain. He had a smooth postoperative period and the drain and nasogastric tube removed after 48 hours. Patient was made to swallow liquids initially and later on semisolids and solids in the next 48 hours. He was able to take normal feeds without any difficulty and felt total relief of symptoms. A repeat X ray showed reduction of osteophyte in C3, C4 and C5 vertebra except for a small remnant in the C6 spiner (Fig 4). Patient was discharged a week later and was symptom free.

DISCUSSION

Diffuse Idiopathic skeletal hyperostosis (DISH) or Forestier's disease is an uncommon systemic skeletal disease probably dysmetabolic or

degenerative in origin yet of unknown etiology (Scutellari et al 1992). It is observed in the middle aged or elderly patients of both sexes and is characterised by ossification of the anterior longitudinal ligament.

Giant cervical osteophyte is significant in ENT practice. The disease can present with spinal or extra spinal manifestations. The neck localisation can produce pharyngeal and laryngeal manifestations due to compression of the structures in the neighbourhood (Medina Bane Gas et al 1990). Extra spinal symptoms like Dysphonia (Medina Bane Gas et al 1990), Hoarseness of voice (Karlin NL 1991), dysphagia and oesophageal food impaction (Underberg Davis et al 1991) and cervical myelopathy (C. Stechison MT et al 1990) have been recorded. Fractures of the spine has also been documented (Paley D et al 1991).

In our study we have encountered 2 patients with Forestier's disease. One presenting with snoring and sleep apnoea due to giant osteophyte in the C1-C2 vertebra. Such a case involving the C1-C2 vertebra is not reported so far. The other patient presented with dysphagia and limitation of neck movements due to involvement of C3, C4, C5 and C6 vertebrae. Both the patients were treated surgically by different approaches and have been relieved of symptoms.

The approaches for excision of cervical osteophyte are many as mentioned below. They

depend on the site, shape and extension.

1. Trans oral Trans-palatine approach.
2. Anterolateral cervical approach.
3. Posterolateral cervical approach.
4. Palate splitting approach (Midline and Transverse).

In lesion occurring in C1 and C2 vertebra transoral transpalatine route is preferred. A palate splitting approach may sometimes be necessary. In this case the lesion is seen projecting into the oropharynx and hence we favoured the less invasive transoral route. As the swelling in this case is easily approachable transoral route is preferred to the trans oral trans palatal (Palate splitting) approach. However, the patient who had osteophyte in the C3, C4, C5 and C6 vertebrae was approached by the anterolateral cervical approach.

CONCLUSION

Diffuse idiopathic skeletal hyperostosis (Forestier's disease) is a rare entity which can cause ENT manifestations when it occurs in the cervical spine. In our study we have encountered two patients one involving C1 and C2 vertebrae causing snoring and sleep apnoea without any spinal manifestations and another case involving the C3, C4, C5 and C6 vertebrae causing dysphagia and limitation of spinal movements. Both the cases were treated surgically by different approaches with complete relief of symptoms.

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2nd National Quiz Contest of A.O.I.

On the Occasion of Golden Jubilee Conference of AOI New Delhi, it is proposed to hold a quiz programme for all the residents and junior colleagues in the speciality during the 50th Annual Conference of The Association of Otolaryngologists of India being held in New Delhi from 8th to 11th January, 1998.

Following format has been laid out for the quiz :

1. All residents and junior colleagues who have passed their post graduation in the last 5 years and are members of AOI are eligible for the quiz.
2. They shall appear for the quiz as a team of two.
3. An elimination round shall be conducted as a written MCQ Quiz at the venue on 9th January 1998 in the afternoon.
4. The top five teams will be eligible for the final round. The final round will be held on 11th January, 1998 at 10.30 a.m. and will consist of oral and visual questions.
5. The Quiz final round shall be conducted by a Quiz Master and his decision in case of any dispute shall be final.
6. Winners shall be appropriately awarded.
7. Last date for submitting application for Quiz is 30th November, 1997. The application may be sent to the undersigned. No entry fee required, but participants must all be registered delegates.

Come one and come all, choose your partners (same as well as opposite sex allowed) and participate in the spirit of fun and game and enrich the Golden Jubilee Celebrations.

Dr. P S. Saharia
Organising Secretary.