

Incidental Finding of Unilateral Hyperplastic Condyle

Haytham Al- Bayaty*, Ramaa Balkaran, and Arlana Bissoon-Moonasar

School of Dentistry, The University of the West Indies, Eric Williams Medical Sciences Complex, Champs Fleurs, Trinidad and Tobago

Corresponding author: Haytham Al- Bayaty, School of Dentistry, The University of the West Indies, Eric Williams Medical Sciences Complex, Champs Fleurs, Trinidad and Tobago, Tel: 868-645-2640 Ext 4112; **E-mail:** hfalbayaty@gmail.com

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The following case of interest was seen at the Dental School of The University of the West Indies, Trinidad.

A 66 year old female patient of Indo- Caribbean descent, presented to the dental school for a research project on severe diabetes and periodontal health. During extra-oral examination an asymptomatic bony mass was palpated in the left temporomandibular joint region. The patient had 2½ finger breadths opening which she reported as being normal and a slight deviation to the right on opening. There was mild facial asymmetry with left mandibular enlargement which she felt did not impact upon her aesthetics.

Her medical history revealed she had arthritis, a myocardial infarction and cerebral infarction in 1992. She was taking analgesics, antihypertensives and diuretics prescribed by her GP. A panoramic radiograph revealed an abnormally large left mandibular condyle and loss of the normal anatomy of the corresponding glenoid fossa and articular eminence. The panoramic radiograph was used as a basic screening radiograph to detect changes in condylar morphology and to assess the temporal bone regions. This imaging technique was justified due to a bony hard swelling being palpated over the left condylar region when compared to the right on clinical examination. This radiograph revealed gross abnormality in the morphology and contour of the left condylar head and alteration in the anatomy of the glenoid fossa region of the temporal bone. The left condyle was enlarged when compared to the right and there was no indication from this view of the presence of the articular eminence or glenoid fossa of the temporal bone on this side. The right temporomandibular joint region appeared radiographically normal.

The patient was informed of the finding. Given that she experienced no associated temporomandibular joint dysfunction or any other symptoms she declined any further investigations of the left temporomandibular joint. Differential diagnoses based on the panoramic imaging alone included condylar hyperplasia or an intrinsic condylar tumour like chondroma or osteochondroma. It is interesting to note that all these differential diagnoses usually present with facial asymmetry and deviation, articular dysfunction, and malocclusion, none of which were present in this case. As seen in the clinical photograph of MR (Figure 2).

Chondroma and osteochondroma would have grown more rapidly than other states of over development and produced more marked asymmetric enlargement. Biopsy would have been necessary to confirm these tumours.

Ideally, if further investigation was to be performed in this case advanced imaging would be indicated. A panoramic radiograph was useful in assessing the presence of a bony pathology of the temporomandibular joint but its use was limited because of its two- dimensional nature and its inability to assess the temporal aspect of joint clearly because of superimposition of other structures.

The radiographic description of the pathology in this case was limited by the fact that only a panoramic radiograph was performed. Computed tomography has now become one of the most useful imaging modalities to assess bone abnormalities of the temporomandibular joint such as growth abnormalities, osseous tumours and fractures [3,4]. Its three dimensional nature would have allowed for accurate assessment of abnormalities in all planes and precise measurement of the actual size of the enlargement. The resolution would also have allowed for improvement so that changes in bony trabeculation would have been better assessed if a tumour were suspected. Complex cases that require major reconstructive surgery would also have benefitted from 3-D CT reconstruction to fabricate stereolithographic models of the patient's maxillofacial skeleton [5] (Figure 1).



Figure 1: Panoramic radiograph showing large left condyle



Figure 2: Anterior view of MR

Unilateral condylar hyperplasia has been reported previously [1,2]. The aetiology includes several factors such as hormonal influences, hypervascularity, heredity, infection or trauma, which may stimulate this excess growth of condyle [6]. In this case other causes of over development were excluded since in other possible causes such as hemifacial hypertrophy, there would have been a unilateral enlargement of all hard and soft tissues of the face [6]. While both Chondroma and osteochondroma have more rapid growth and may cause even greater asymmetric condylar enlargement [6] than was present in this patient.

The patient had no history of trauma or infection, nor familial history of condylar hyperplasia. This uncommon, but not unknown, observation warranted no corrective surgery. In this case, the patient was missing her lower molars bilaterally, therefore we could not have determined whether or not there was malocclusion in buccal crossbite. Treatment depended on age, degree of deformity and Hypofunction [6]. If she had severe facial asymmetry, prognathism, significantly reduced opening on the affected side, then she may have benefited from surgical intervention such as conlylectomy or unilateral sagittal split osteotomy. She was asked to return if symptomatic.

Given the patient's age, complex medical history and lack of symptoms, there was no need to treat the patient at that point in time but monitoring via clinical review of the patient was recommended.

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