

**OSTEOMA OF THE CONDYLE, CAUSE OF CLICKING AND DIFFICULTY IN SPEECH": A RARE CASE REPORT**

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**ABSTRACT**

Osteoma is a benign neoplasm composed of mature bony tissue. It is a rare lesion which occurs mainly in craniofacial region. Only a few cases of osteoma of the condyle have been reported in the literature. An osteoma of left condyle causing limited mouth opening, deviation of occlusion, clicking sound in the TMJ and difficulty in speech, is presented here in a 30 years male singer, to alert that this lesion could be possible cause of limited mouth opening, deviation of the occlusion, clicking sound and difficulty in speech.

**Key words:**

Osteoma; condyle; limited mouth opening

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**INTRODUCTION**

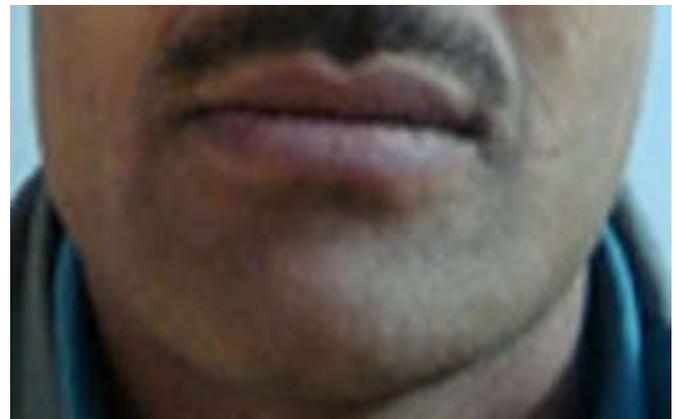
Osteoma is a benign tumour composed of mature compact or cancellous bone which increases in size by continuous formation of bone.<sup>1</sup> It is asymptomatic slow growing solitary lesion mainly affecting young adults.<sup>2,3</sup> Males are affected two times more than females.<sup>2</sup> Osteoma occurring in condyle or condylar process may cause morphologic and functional disturbances, including facial asymmetry and temporomandibular joint (TMJ) dysfunction. Sometime Osteoma of condyle may cause acute pain and limited mouth opening.<sup>4</sup> Osteomas are essentially restricted to the craniofacial skeleton.<sup>5</sup> The mandible is more commonly involved than maxilla, the lingual aspect of the body of the mandible and the lower border in the region of the angle being the most common sites.<sup>2,6</sup>

**CASE REPORT**

A 30 year male reported to department of Oral and Maxillofacial surgery, CSM Medical University with chief complaint of disfigurement of face since 4 years, clicking sound in left temporomandibular joint and difficulty in speaking since 3 years. Patient had consulted to general practitioner but no relief was observed, consequently patient was referred to our centre. Extra oral examination showed disfigurement of face and deviation of chin towards the right side during mouth opening (Fig.1).

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**Fig 1** preoperative photograph of the patient

Mouth opening was 42 mm. Mandibular right sided teeth were in cross bite relation with 3 mm midline shifting, but occlusal canting was absent. Clicking sound was felt in left TMJ on mouth opening without any pain. Orthopantomogram (OPG) analysis showed increased length of mandibular left condyle while body length was equal on both side. A slight radio opaque area was seen in relation to medial side of left subcondyle (Fig.2).

On the basis of x-ray and clinical findings provisional diagnosis of condylar hyperplasia was made and excision of condyle was planned. Patient underwent surgery under GA. Alkayat & bramley incision was given and condyle was exposed. A cut was made 1 cm below the neck, condyle along

with tumor was peeled off from medial attachments and removed(Fig.3).



Fig 2 preoperative OPG (orthopantomogram)



Fig 5 post operative OPG



Fig.3 Resected condyle

Excised specimen was submitted for histopathological examination. Microscopic specimen shows bony hard bilobulated mass measured 4 X 2 X 2 cm. Histopathological finding showed mature lamellated bone with minimal intervening fibrocollagenous tissue. No cartilaginous cap was evident. Outer surface showed a fibrous capsule. On the basis of above finding final diagnosis of peripheral osteoma was confirmed (Fig.4). Post op orthopantomogram was done . No gross asymmetry was seen clinically as well as radiographically (Fig.5 &6).

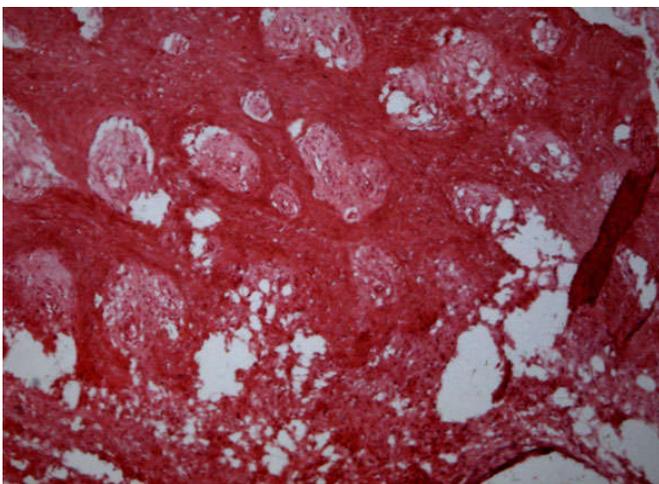


Fig.4 histopathology slide



Fig 6 post operative photograph of the patient

## DISCUSSION

The osteoma is benign neoplasm characterized by proliferation of either compact or cancellous bone usually in an periosteal or endosteal location.<sup>7</sup> It is essentially restricted to the maxilla and mandible and is rarely, if ever diagnosed in other bones.<sup>5</sup> In Gardner syndrome, multiple osteomas are presents in the alveolar bone of the maxilla or mandible.<sup>7</sup> It is slow growing, asymptomatic, usually solitary lesion which affects mainly young adults.<sup>2,3</sup> Facial asymmetry and temporomandibular joint(TMJ) dysfunction may result as a morphologic and functional disturbances due to presence of osteoma of condyle or condylar process.<sup>4</sup>

Osteoma occurs two times more commonly in males, with ages ranging from 14 to 58 years, with the mean age of 29.4 years.<sup>2</sup> The lesion is found more often in the mandible rather than maxilla, lingual aspect of the body of mandible and lower border in the region of angle are the most commonly involved sites.<sup>2,6</sup> Osteoma of condyle is uncommon , only few cases have been reported to till date.<sup>3</sup> In 1927 Ivy was the person who reported the first case of osteoma of condylar process.<sup>8</sup> The etiology of osteoma is not clear. It may be developmental, neoplastic, or most likely reactive in nature.<sup>2</sup> A combination of trauma and muscle traction, which may initiate an osteogenic reaction, has been suggested as the underlying pathogenesis of osteoma. History of trauma was reported in our case which could have initiated formation of tumor.

Trismus or limited mouth opening is a common clinical problem encountered by dental practitioners.<sup>9</sup> Osteoma of condyle may cause a slow, progressive shift in the patient's occlusion with deviation of the midline of chin towards unaffected site. This results in facial asymmetry and temporomandibular joint dysfunction. The most common clinical manifestations involving the condyle are malocclusion and facial asymmetry. In our patient malocclusion, clicking sound in temporomandibular joint and difficulty in speech was observed, which was not observed in previously reported cases. As reported patient was singer, problem in pronunciations of some words was felt, which could be due to change of oral cavity space and occlusion.

There are 2 types of osteomas: central osteoma, arising from increase in cancellous bone, and peripheral osteoma, arising from increase in cortical bone, with the later being the most common.<sup>10</sup> Osteomas occurring in the condylar process can be classified into 2 types – those that proliferate and cause replacement of the condyle by osteoma, and those that form a pedunculated or osseous mass on the condyle or neck of the mandible.<sup>3</sup> In reported case a pedunculated mass was seen attached to medial side of condyle and histopathologically showing compact bone which is suggestive of peripheral osteoma.

Radiographic appearance of the lesion shows osteomas as circumscribed masses similar to density of normal bone. They are smooth surfaced with thin sclerotic border. Centre of the masses may exhibit mixed radio opaque-radiolucent appearance depending on the amount of marrow tissue present. Osteomas are often confused with complex odontomas. Similarly endosteal osteomas are difficult to differentiate from foci of condensing osteitis, focal chronic sclerosing osteomyelitis or idiopathic osteosclerosis.<sup>5</sup>

Histologically an osteoma consists of either normal appearing dense mass of lamellar bone with minimal marrow tissue (compact osteoma), or of trabeculae of mature lamellar bone with intervening fatty or fibrous marrow (cancellous osteoma).<sup>1</sup> In our case compact lamellar bone with minimal intervening fibrous stroma was evident.

Surgical excision is treatment of choice if a large osteoma causing pain, facial asymmetry and malocclusion, whereas periodic observation is necessary in case of small asymptomatic lesion. In reported case condylectomy was performed in view of patient's progressive deviation of midline and malocclusion. Recurrence after excision is extremely rare.<sup>2</sup> There is only 1 reported case of recurrence of a periosteal osteoma of the mandible following excision till date.<sup>6</sup> Malignant transformations of the osteoma have not been reported.

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