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Case Report

Chondroma of the mandibular condyle- rare location of a common benign cartilage tumour: case report and review of literature

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ABSTRACT

Chondroma is a benign tumour of mature hyaline cartilage. It is common in the tubular bones the hands and feet and conspicuous by its rarity in the mandible. We hereby present an interesting case of chondroma of the mandibular condyle that was managed in our department. The antecedent radiological findings and postoperative histopathological peculiarities of the case are discussed. This case also focuses the negligent attitude of our society towards one's health problems until they are fraught with beliefs of cancer. Chondroma of the mandibular is a rare, benign slow growing tumour. Condylectomy is considered adequate treatment for all condylar masses. Surrounding margins of healthy soft tissue is also excised to prevent recurrences.

Keywords: Chondroma, Mandible, Condyle

INTRODUCTION

Chondroma is a benign tumour of mature hyaline cartilage.[1,2] It is common in the tubular bones the hands and feet and conspicuous by its rarity in the jaw bones.[2] We hereby present an interesting case of chondroma of the mandibular condyle that was managed in our department. The antecedent radiological findings and postoperative histopathological peculiarities of the case are discussed. This case also focuses the negligent attitude of our society towards one's health problems until they are fraught with beliefs of cancer.

CASE REPORT

A forty eight old male presented to us with progressive visual swelling on the left side of face and facial abnormality. It was insidious in onset and gradually progressive to its present size. The swelling was associated with occasional pain especially on mouth opening. He also complained of disturbance of dental occlusion and some restriction in mouth opening. He was aware of these symptoms since the past four months but reported now due to the fear of cancer.

There was no history of facial trauma. The medical and family history was not significant. He was non-alcoholic, non-smoker and had no history of any drug abuse.

His general built and systemic review was normal. On inspection, there was obvious facial asymmetry. The face was deviated to the right side (Figure 1). Skin overlying the swelling was normal in appearance with no signs of erythema or ulceration. On palpation of the swelling, there was a firm lump of size approximately 1.5×1.5 cm on the preauricular region with diffuse borders. The lump was non tender and it moved with condylar translation on mouth opening. The external auditory canal and tympanic examination on the left side was normal. On mouth opening, mandible was centrally deviated to the right side. Dental malocclusion was noted (Figure 2) along with left sided open bite and right sided lateral cross bite.

An interincisal distance of 2.8 mm was measured. There was no paresthesia in the preauricular region. Lymphadenopathy was absent.

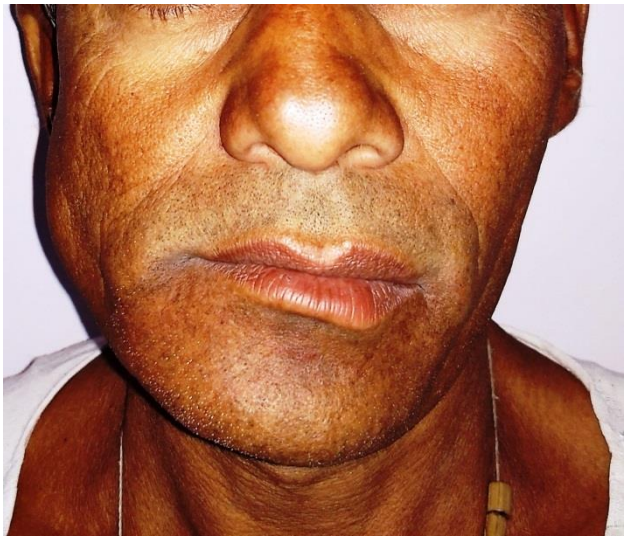

Figure 1: Front on view of the patient showing asymmetrical facial feature with the deviation of the face to the right side.

Figure 2: On mouth opening obvious dental malocclusion present on the left side.

This prompted us to request a CT scan examination of the face which revealed localised radiolucent lesion on the condylar head (Figure 3). Based on the above findings, a presumptive diagnosis of a benign mass was made. Surgical exploration and local excision of the lesion was planned under general anaesthesia.

Preoperative routine investigations were within normal range. Standard preauricular incision was used for condyle exposure (Figure 4). Right sided condylectomy was done (Figure 5). Condylar stump were smoothened. Central alignment of the dental arches was obtained and intermaxillary fixation (IMF) was done using Erich arch bars and stainless steel wires. Condylar reconstruction was not done in this case. After appropriate hemostasis, wound was closed in layers. The excised condylar specimen was sent for histopathological examination which confirmed the diagnosis of chondroma (Figure 6).

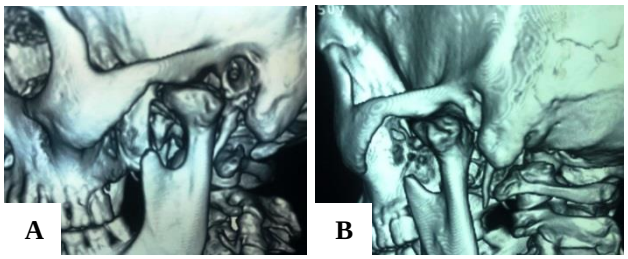

Figure 3 (A and B): 3 D CT scan of the face showing localised radiolucent lesion on the left condylar head.

Figure 4: Pre auricular skin incision taken to gain access to the lesion on the condylar head.

Figure 5: Intra operative view of the condylectomy specimen after surgical excision.

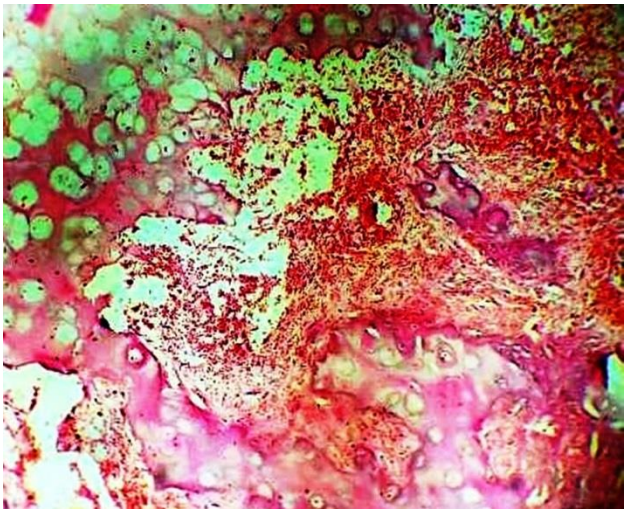

Figure 6: Histopathological examination showed mature hyaline cartilage with numerous chondrocytes confirming the diagnosis of chondroma.

Postoperatively, patient was kept on IMF for four weeks. The patient is undergoing regular follow ups. At eight months he has maintained stable occlusion with no further symptomatic complaints.

DISCUSSION

Chondroma can be classified into three types, enchondroma, juxtacortical or extra skeletal based on the site of origin within the bone or soft tissues.[3] As they are rare in the condylar region, they tend to be confused with temporomandibular joint dysfunctions especially in the early stages. [3] They generally occur in the fourth to fifth decades of life with no apparent sex predilection.[4] Most often they are asymptomatic, slow growing.[4] No association of chondroma formation have been found with trauma.[5]

Within the facial bones, the occurrence of chondroma is quite exceptional. In this region, they generally occur in the maxilla.[6] True chondroma of the mandibular condyle is a very rare occurrence.[2,6] Within the mandible, they commonly occur at the body and coronoid processes.[6]

The differential diagnosis includes osteoma, osteoblastoma, osteochondroma, condylar hyperplasia, chondroma, chondroblastoma, chondromatosis, chondrosarcoma and osteosarcoma.[7]

Amongst the above entities, the possibility of osteochondroma must be closely considered as differential diagnosis in this region. Chondroma is a benign tumour characterised by the formation of mature hyaline cartilage. Microscopically, benign chondroma may be difficult to distinguish from low grade chondrosarcoma.[7] A closer look into increased cellularity, numerous binucleate cells, mitotic figures and plump chondrocytes with prominent chromatin and nucleoli favours the diagnosis of malignant transformation.[7] The chondroma may rarely develop in maxilla and mandible because of vestigial cartilaginous rests. [7]

Chondroma is typically radiolucent masses and may exhibit calcified foci ranging from powder like to dense aggregates.[8] However, Osteochondroma is cartilage capped bony projection on the external surface of the bone.[9] Moreover, osteochondroma has more common occurrence elsewhere in the mandible than chondroma.[10]

Chondroma is radio resistant tumour.[11] Moreover, radiation is not preferred because of the potential of these tumours to undergo malignant transformation later on.[11] Condylectomy is considered adequate treatment for all condylar masses.[2,4] Surrounding margins of healthy soft tissue is also excised to prevent recurrences.

After condylectomy, reconstruction may be required to restore ramus height. If reconstruction is required, it is usually done with autogenous costochondral graft or an alloplast.[7] We did not do condylar reconstruction due to adequate ramus height and proper positioning of the re-shaped condyle in the condylar fossa.

A long follow up is required to look for any evidence of recurrence or possible malignant transformation.[12,13]

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