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OSTEOMA - Is A Reactive Or A Developmental Anomalies - Dilemma In Oral Jaw Lesions

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Abstract:
Osteoma is a reactive lesions or a developmental anomalies, dilemma in oral jaw lesions, because of when osteoma occur with simultaneously in relation to retained deciduous tooth 73 and erupting tooth 33. So clear vision needed for proper diagnosis and treatment plan and prognosis of the lesions. This presenting case osteoma represent no any signs of pain and swelling in relation to retained deciduous tooth 73 and erupting tooth 33 before 6 months when taken OPG. But after extracted retained deciduous tooth, the pain and swelling started gradually and persist for two weeks and not relieved by analgesic. So needed to rule out wheather it was a osteoma or osteoblastoma. So that here necessary to discuss about this case osteoma, is a reactive lesions, due to the bone remodeling of extracted socket of retained deciduous tooth 73 or developmental anomalies with erupting tooth 73.

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I. Introduction:

Osteoma is one of the benign lesion of the oral bony lesion. Most commonly occurs in the mandible, maxilla and sinonasal region. Some osteoma developed due to infection and inflammation and some bacterial and mechanical irritation. And some osteoma developed from developmental disturbances. Sometimes multiple osteomas developed with syndrome like. So clinical importance of Osteoma is necessary for knowing the it's a simply reactive lesions or due to any syndrome. In this article discuss about the osteoma case ,present in relation to retained deciduous teeth73 and erupting permanent teeth 33 in relation to left front teeth region.

Patient name Mr.Mahindran 24/ Male came with Chief complaint of pain and swelling in the left lower one third of the face for past 2 months .History of presenting illness ,Pain is continuous , sharp in nature and not relieved by medication. No relevant medical history /drug allergy .H/O Extracted retained deciduous – 73 and history of no evidence of pain and swelling [Fig 1] in relation to retained deciduous 73 and erupting 33 before extracted deciduous 73 , after that the pain and swelling started gradually and persist for two weeks and not relieved by analgesic. No relevant family history, Not Married, Mixed diet, No deleterious habits. General examination Moderately Built and Nourishment. No evidence of Anemia, Jaundice, Cyanosis, Clubbing and Oedema. vital signs are Normal in general examination. Extra oral examination: [Fig 2] Face – Asymmetrical, No abnormalites are detected in Face ,Eyes ,Nose ,ears, Head, neck ,TMJ :No deviation, pain and clicking sound .Mouth opening- Normal -44mm ; No palpable lymphnodes **.**

II. Radiographic Examination:

Ortho pan demograph (OPG):

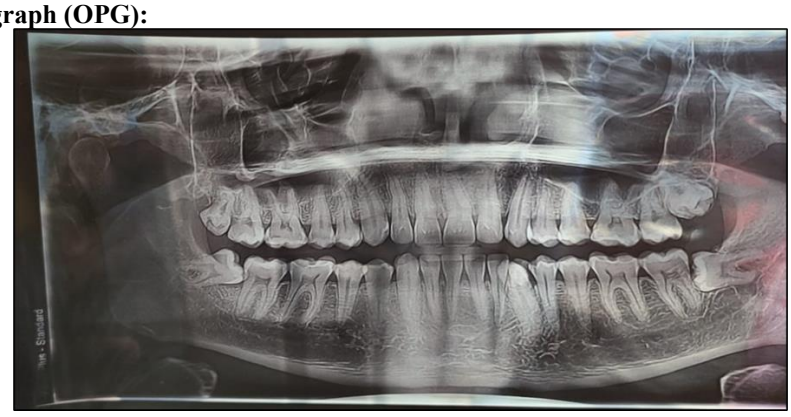

Fig 1: No evidence of swelling irt to 73 and 33 before extracted 73 before six month in OPG

Intra Oral Examination

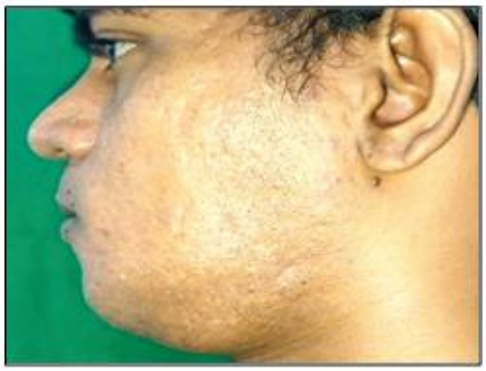

Fig 2:Extra oral Examination

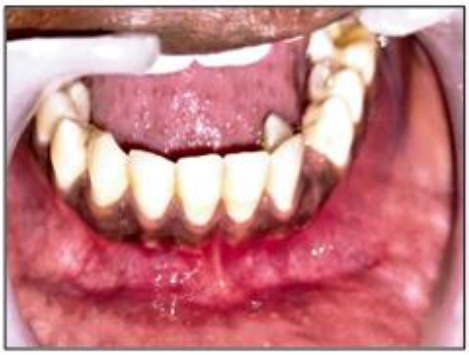

Fig 3 -Intra oral Examination, After extracted Retained deciduous teeth 73 and Erupting 73

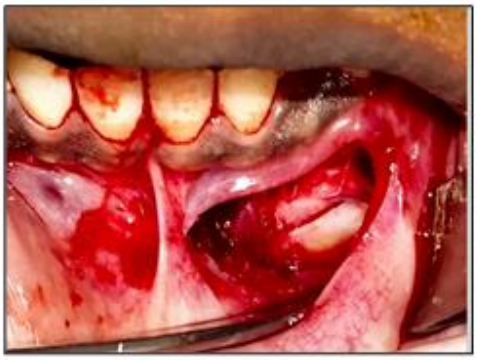

Fig 4:After exposing the site of the lesion

Fig 5:Incision biopsy ,Grossing picture

Soft tissue examination - On inspection: [Fig 3] Lips, Buccal mucosa, Tongue: No abnormality detected. Buccal vestibule: Obliterated .Local examination Site: Bony swelling present buccal cortex in relation to 31,32, 33. SIZE: 2x2 cm , No Pus discharge . On palpation: Inspectory findings were confirmed. consistency : Hard

Macroscopic Features

Received 2 bits of hard tissue[Fig 5] Colour- Greayish white and greayish black in colour, hard in Consistency, irregular in shape and surface, measuring the size- 1.2x0.8x0.5 cm .Hard tissues are subjected to decalcification until firm consistency of tissue section and processed routine increased concentration of alcohol and xylene solution and wax embedding and cutting the thin section of tissue section and dewaxing and then clean with xylene solution then stained with Hematoxylin and Eosin staining method and dry the slide and mounting with cover slip .

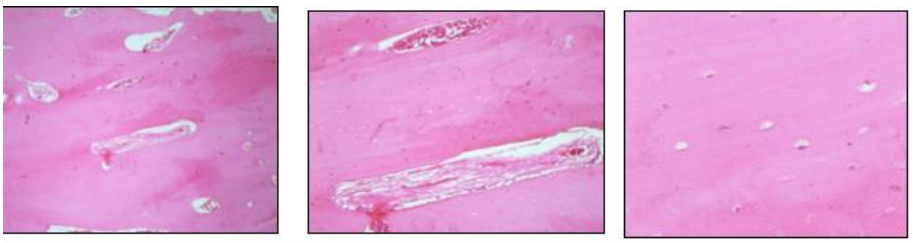

Fig 6: 4x 10x 40x

Histopathological Features

The given H&E stained de calcified hard tissue section shows bony trabeculae with bone marrow containing blood cells and sparse connective tissue. Osteocytes embedded within lacunae is seen inside the bony trabeculae. Focal areas shows osteoblastic rimming around bony trabeculae. Some areas are devoid of osteoblastic rimming .

Histopathologically Differential Diagnosis

Osteoid Ostema, Osteoblastoma, Fibrous dysplasia, Diffuse sclerosing osteomyelitis, Diffuse sclerosing periostitis

Osteoid Osteoma:

Centrally exhibits irregular trabeculae of osteoid or woven bone ,surrounded by numerous osteoblast and scattered osteoclasts. The osteoblasts have ample cytoplasm and hyperchromatic nuclei .The loose fibrous stroma includes dilated vessels and hemorrhage. At periphery dense sclerotic bone than Fi osteoblastoma. Pain relieved by Analgesic. [Fig 7]

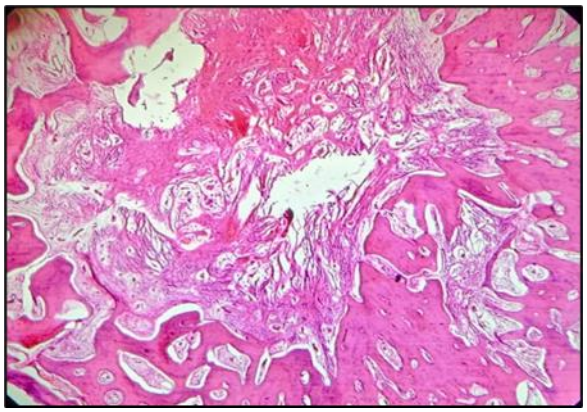

Fig 7

Osteoblastoma:

Centrally exhibits irregular trabeculae of osteoid or woven bone, surrounded by numerous osteoblast and scattered osteoclasts. Sheets or single layer of large osteoblasts with occasional mitotic activity, blue bone matrix and irregular bony trabeculae. [Fig 8],Pain is Not relieved by Analgesic. (Fig 8) So we can differentiate Osteoblastoma from osteoma with these clinical features. Because of osteoblastoma is a true neoplasm and cause neuropathic pain, but in osteoid osteoma pain is due to inflammatory reaction and pain is relieved by NSAIDs and antibiotics.

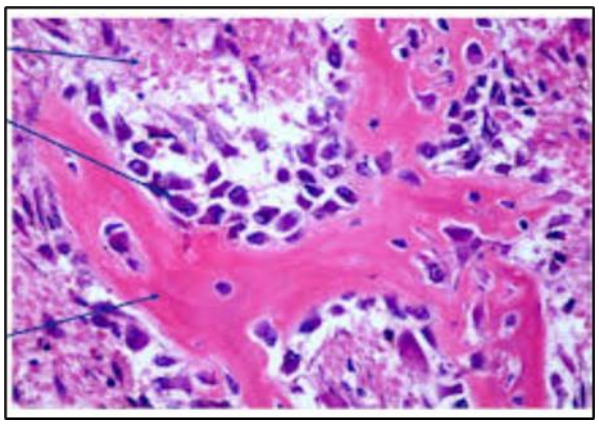

FIG 8

Fibrous Dysplassia:

Irregularly shaped trabeculae of immature bone woven) in a cellular fibrous stroma. The abnormal bony trabeculae tend to be thin and disconnected with elongated curvilinear shapes like chinesse letter C,Y, and U .Osteoblastic rimming absent .In later stage woven bone is replaced by lamellar bone.[Fig 9]

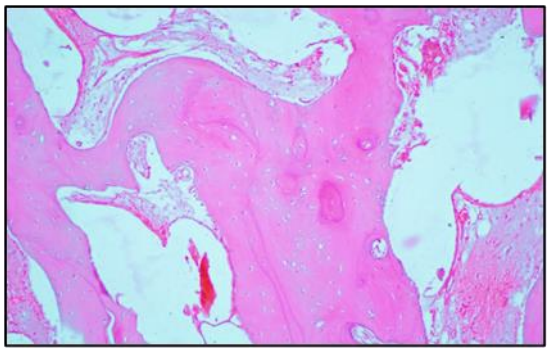

Fig 9

Diffuse Sclerosing Osteomyelities:

The sclerosis occurs adjacent to areas of inflammation, necrosis often occurs. The necrotic bone surrounded by sub acutely inflamed granulation tissue [Fig 10]

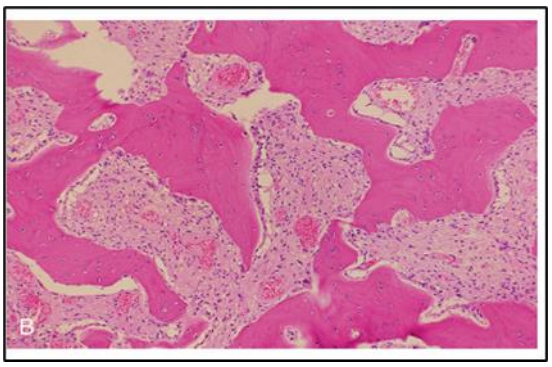

Fig 10

OSTEOMYELITIS WITH PROLIFERATIVE ERIOSTITIS: PERIOSTITIS OSSIFICANS, OSSIFYING PERIOSTITIS): Parallel rows of highly cellular and reactive woven bone which arranged in perpendicular to the surface, the trabeculae form interconnecting meshwork of bone resembling immature fibrous dysplasia ,relatively uninflamed fibrous connective tissue is evident [Fig 11]

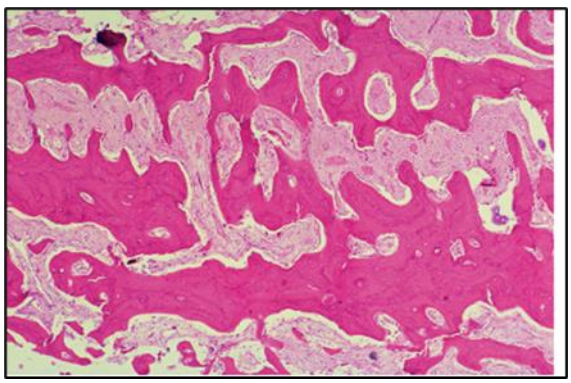

Fig 11

III. Discussion

The osteoma is a benign neoplasm characterized by proliferation of either compact or cancellous bone usually in an endosteal or periosteal location .The most frequent subtype of osteomas to develop in the bones of the skull and face is peripheral osteoma at any age and 2:1 male to female ratio.

Clinical Features

Peripheral Osteoma: Slow growing tumor , sessile ,polypoid shape ,0.5-8 cm a well-defined, unilateral, sessile or pedunculated mass that is 10 to 40 mm in diameter or greater

[Fig 12]

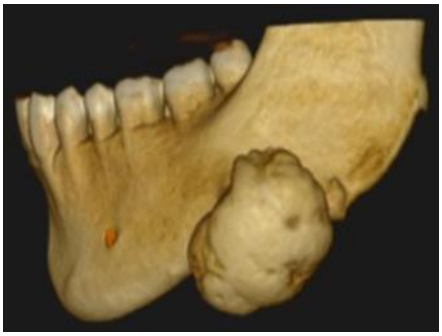

Fig 12

Endosteal Osteoma: Endosteal origin is slower clinical manifestations, since conciderable growth must be occur before there is expansion of the cortical plates'Seldom pain is associated with this tumour Solitary peripheral osteomas of the jaws are a rare entity. They involve the mandible more frequently than the maxilla with the sites of greatest predilection being the lingual aspect of the body, the angle, and the inferior border of the mandible.

Soft Tissue Osteoma: Extra osseous OSTEOMA usually follows a history of trauma also known as a osteoma mucosa analogous to the dermal lesion osteoma cutis and osseous choristoma Tongue and buccal mucosa -2cm in diameter. Usually compact, well circumscribed lamellar bone.

Etiopathogenesis: Infection and Irritation or Inflammation and Developmental lesions[1].An osteoma typically appears on radiographs as a round or oval, well-circumscribed radiopaque mass with a broad base. Differential diagnosis of peripheral osteoma includes exostosis (torus), osteoblastoma, osteochondroma, osteoid osteoma and ossifying fibroma. Exostosis is frequently bilateral and symmetrical and occurs in a region of attached gingiva whose growth ceases at puberty. Osteoblastoma is a bony lesion which is usually attached to the cortical bone and is painful and rapidly expanding in nature. Osteochondroma typically develops on the mandible's condylar or coronoid region and is rather painful disease that frequently exhibits rapid growth. Ossifying fibroma in its advanced stage, typically containing a fibrous component within a cemento-osseous structure and can resemble peripheral osteomas [2] ,

Histo Pathological Features Of Osteoma: Compact or ivory osteomas are composed of normal apperaring dense bone with minimal marrow Cancellous osteomas are composed of bony trabeculae and fibrofatty marrow. Osteoblastic activity fairly prominent. Some sino orbital osteomas exhibit so-called osteoblastoma –like features, characterized by enlarged osteoblasts, woven bone, and loosely arranged fibrovascular stroma [3]

IV. Conclusion

The frequency of the osteoma is low, affecting 0.01-0.04 % of the population only.The frontal bone, mandible, and paranasal sinuses are the main areas of the maxillofacial region affected by peripheral osteomas[5]There has not been a single instance of an osteoma turning malignant, and recurrence has very sometimes been noted. For patients unwilling to get these osteomas surgically removed, bi-annual radiographic evaluation should be done.

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