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A Rare Case of Massive Residual Cyst

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Abstract: *Residual cysts are uncommon odontogenic cysts, which occurs due to incomplete surgical removal of a radicular or other inflammatory cyst. Residual cyst has got similar, clinical and histological findings as that of radiclur cyst, except their presence in extracted site. Here we present a case of huge residual cyst involving more than one half of the mandibular body, its clinical, radiographic, histological features and management is being discussed here*

Key words: *Asymptomatic, Edentulous, Residual cyst, Swelling*

I. Introduction

A true cyst is defined as a pathological cavity with an outer wall of fibrous connective tissue with a lining epithelium [1, 2]. Radicular cyst develops from epithelial remnants which are stimulated by an inflammatory process originating most commonly from a non-vital tooth [3]. When the periapical inflammatory tissue is not curetted along with the tooth extraction, the periapical lesion remains within the jaw bones as a residual cyst [3,4]. With the time the cyst may regress, remain static or can grow in size [3, 4] involving large area of the jaw. Large odontogenic cysts within the jaw bone are not very common [3, 4] Here we report a case of huge residual cyst involving nearly half of the mandibular body.

II. Case Presentation

A 62-year-old male patient reported to the department of oral medicine and radiology with the chief complaint of swelling of lower left jaw which was noticed 6 months before, the swelling was gradual in onset, growth was continuos in nature without any periods of remissions or exarcebations. The swelling was not associated with pain, parasthesia or any other symptoms. On eaxmination of the swelling extra orally [Figure 1&2] a diffuse solitary sweeling was seen on the left side of mandible, extending to the lower margins measuring 3x2 cms, which on palpation is bony hard in consistency. On intra oral examination,[Figure 2] patient has got completely edentulous upper and lower arch, and lower arch shows a diffuse swelling extending fron 33 region to the retromolar region, measuring 3x2 cms, with buccal and lingual cortical plate expansion and obliteration of buccal vestibule. On palpation, the consistency was non uniform with areas having yielding on pressure along with other areas which were bony hard in consistency. A fine-needle aspiration revealed a dark-red-colored, blood-tinged, which was highly viscous [Figure 4] . The high soluble protein content of the cyst fluid (that is, 54 g/L) appeared to rule out an odontogenic keratocyst.

On radiographic examination, intra oral periapical radiograph and panoramic radiograph[Figure5 &6] revealed a well defined radiolucency almost involving the left half of the lower edentulous arch measuring 5x3 cms involving the entire superoinferior aspect of boby of mandible leaving 1-2 mm of unaffected margin. An mandibular occlusal radiograph was taken [Figure 7] whichn revealed both, buccal and lingual cortical plate expansion. Based on the clinical and radiographic examination a differential diagnosis of ameloblastoma and residual cyst was considered. The cyst was then carefully enucleated without breaching the oral mucosa and surgical mandibular resection and reconstruction was done. The specimen was sent for histopathological examination [Figure 8] which revealed presence of several sections of a cystic epithelial lining made of stratified squamous epithelium,with thicknesses which was non uniform. Connective tissue wall composed of collagen fibres, fibroblasts, inflammatory cells, blood vessel, and cholesterol clefts together with multinucleated cells . Based on these features, the diagnosis of residual cyst was considered.

III. Discussion

Residual cyst occurs as a result of incomplete surgical removal of a radicular or other inflammatory cyst. Residual cyst has got similar, clinical and histological findings as that of radiclur cyst, except their presence in an extracted site. If a tooth is extracted leaving the periapical pathology inside the bone, it can lead to the formation of a residual cyst over time. In our case patient gives a previous history of extraction 10 years before After a few period of time, the cyst may resolve, remain static or increase in size.[5] In our case we have a

huge cyst measuring 5x3 cms in a completely edentulous patient. The radiographic feature is mostly well-defined unilocular radiolucent structure of varying size at the edentulous area of a previously extracted tooth site. In our case panoramic radiograph revealed a huge unilocular radiolucency with sclerotic borders, with expansion of the buccal and lingual cortical plates on occlusal radiograph.[6] A detailed clincal, radiographic and histo pathological evaluation is required as numerous cysts have got similar clinical and radiographic featuresof clinical, histopathological and radiological findings are important as there are numerous cysts that are similar clinically and radiographically.[7]

Approximately 10% of odontogenic cysts remain asymptomatic.[8]Very rarely patients voluntarily report with a chief complaint of the residual cyst because they are usually asymptomatic and commonly diagnosed through routine clinical and radiographic examination. . In our case, patient complains of an asymptomatic swelling, which was noticed 6 months before. Residual cysts are normally slow growing and structures like floor of maxillary sinus, mandibular canal and other anatomical structures can get deviated. In our case we can see, the mandibular canal inolved, but the cortical plates seem to remain intact. Radiographically ameloblastoma and keratocystic odontogenic tumor are normally considered as differential diagnosis. Odontogenic keratocyst has got a distinct histologic appearance comprising of epithelial lining of 6-8 layer thickness, which has corrugated parakeratinized surface with palisaded basal layer [4]. Ameloblastoma has got a well-recognized microscopic appearance consisting of ameloblastin epithelium, in which the basal cells are cuboidal or columnar with hyperchromatic nuclei that shows reversal of polarity (away from basement membrane) and superficial epithelial cells which are loosely cohesive and resemble stellate reticulum Histological features of residual cyst are similar to that of radicular cyst, in our case histopathological examination revealed presence of several sections of a cystic epithelial lining made of stratified squamous epithelium,with thicknesses which was non uniform. Connective tissue wall composed of collagen fibres, fibroblasts, inflammatory cells, blood vessel, and cholesterol clefts together with multinucleated cells. Types of treatment that can be conducted for the residual cyst is either marsupialisation or enucleation depending on the size of the cyst, but in our case mandibular resection was done due to the huge size

IV. Conclusion

Residual cysts are normally accidental findings as they are asymptomatic. Clinically and radiographicaly it is very difficult to differentiate it from keratocystic odontogenic tumor and ameloblastoma. It is important to follow a systematic diagnostic protocol for the proper diagnosis and management of the cyst

Reverences

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Figures

Figure 1 Extra oral view

Figure 2 Profile view

Figure 3 Intra oral view

Figure 4-intra oral periapical radiograph

Figure 5 – panoramic radiograph

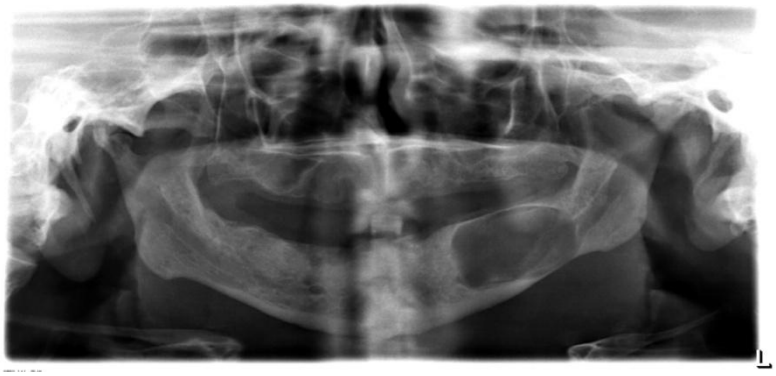

Figure 6 mandibular occlusal radiograph

Figure 7 Fine needle aspirate

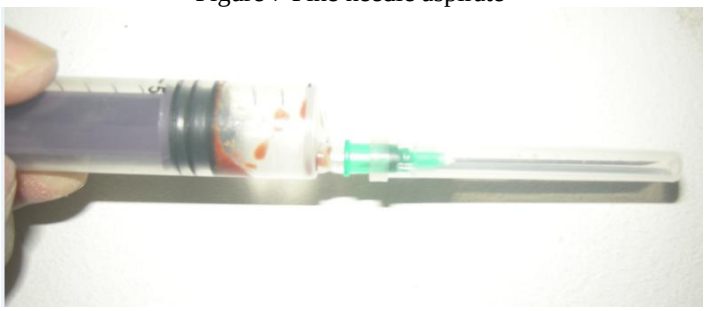

Figure 8 histopathology