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Recurrent Extrasosseous Ameloblastoma- An Interesting Case Report With Review Of Literature.

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ABSTRACT

Ameloblastoma “is a term which indicates a tumour originating from, or consisting of, enamel-forming cells. It would appear to mean that the embryonal enamel-forming cell is the basic cell in all tumours. Ameloblastomas are usually found in the hard tissues of the jaws, but have also been reported in the adjacent soft tissues. The extent of the tumour resection is critical because the recurrences seem to arise from the soft tissues. This case report indicates the need for long term follow-up of cases of Ameloblastoma even after radical excision

Keywords: ameloblastoma, odontogenic tumours, recurrence.

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INTRODUCTION

The ameloblastoma is the most common clinically significant odontogenic tumour. They may arise from rests of dental lamina, from a developing enamel organ, from the epithelial lining of an odontogenic cyst, or from the basal cells of the oral mucosa [1,2].

It often presents as a slow-growing, painless swelling causing expansion of the cortical bone, perforation of the lingual or buccal plates, and infiltration of soft tissue [3]. The peripheral ameloblastoma is rare, its location is in soft tissue and the behaviour is less aggressive. The rates of recurrence depend on the type of surgery and range from 15-25% after radical surgery to 75-90% after conservative surgical management. Ameloblastoma has a persistent and slow growth, spreading into marrow spaces with pseudopods without concomitant resorption of the trabecular bone. As a result, the margins of the tumor are not clearly evident radiographically or grossly during operation, and the lesion frequently recurs after inadequate surgical removal [4]. Most recurrences occur at the site of the primary tumour. Lesions are also known to recur in bone grafts, and rarely, recurrence involves adjacent soft tissues [5]. Recurrence often takes many years to become clinically manifest, and 5 year disease-free periods do not indicate a cure.

Case Report

Mr. Venkatachalam aged 67 years came to the department with a chief complaint of a growth in the lower right back teeth region for the past 3 weeks. He has not experienced any pain or discomfort because of the growth. Past dental history record reveals right hemimandiblectomy done 9 years back following a diagnosis of ameloblastoma in the right molar region. Patient past medical history were non-contributory.

Extra oral examination revealed Facial asymmetry present due to hemimandiblectomy over the right side lower face in relation to body of the mandible (FIG.1). Scars due to the surgery were apparent. No visible pulsations evident and no ulceration or sinus discharge is evident.

Intra oral examination showed on inspection a single sessile spherical growth measuring about 2x1.5 cm in size is seen on the right side posterior mucosa on the previously operated site (FIG.2). The surface is smooth and pink in colour. Adjacent to the growth there is an area of hyperkeratinization due to trauma caused by supra-eruption of 17 (FIG.3). Palpation of the spherical swelling revealed non tender, firm, not reducible, not fluctuant, not attached to the underlying muscles. Palpation revealed a defect in the body and ramus of the mandible suggestive of absence of the right mandibular bone. The orthopantomogram shows absence of right mandibular body and ramus indicating surgical resection of the mandible done in previous surgery (FIG.4). The soft tumor was treated by local surgical Excisional biopsy with the patient consent and specimen sent to the Oral Pathology department. Histopathological analysis presented as ameloblastoma (Fig.5). A recurrent tumor from the previous intra-osseous ameloblastoma had developed in the adjacent soft tissue due to seeding. The excision site healed well and there has been no sign of recurrence after 4 years.



Figure 1: facial deformity with scar present in the anterior mandibular region.



Figure 2: Osseous defect in right alveolar region of mandible



Figure 3: An asymptomatic lesion in right alveolar mucous



Figure 4: The x-ray exam showing the area in right mandible that suffered resection

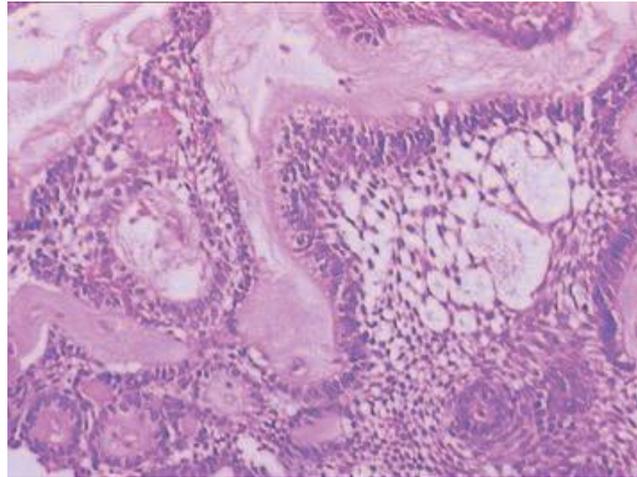


Figure 5: Follicle type ameloblastoma with odontogenic epithelium islands in a stroma of fibrous connective tissue

DISCUSSION

Recurrence rates for ameloblastoma of 50% to 90% have been reported in various studies after curettage [6]. Marginal resection is the most widely used treatment, but recurrence rates of up to 15% have been reported after marginal or block resection. The actual margin of the tumour often extends beyond its apparent radiographic or clinical margin [2]. Recurrence of ameloblastoma is thought to be related predominantly to inadequate surgical removal of the primary tumour [7]. The overlying mucosa should be included in the resection if the tumour invades the alveolus and perforates through the alveolar bone. Histologically, cells have been shown to be present several millimetres from the radiographical margin of the lesion, that has led the principle of resection with a 1.5–2 cm margin beyond the radiological limit seems a safe procedure [8]. Tumour seeding should be considered as the most important causative factor in the recurrence of ameloblastoma in bone grafts [9,10].

Techniques such as aggressive local curettage followed by liquid nitrogen cryotherapy have also been advocated with high levels of success. Algorithms have been developed recommending curettage and cryotherapy for intrabony lesions and resection for lesions with an extraosseous component. Beyond surgery, there are other alternative therapies for ameloblastoma, such as radiation therapy. There is published evidence on the usefulness of radiation therapy in the treatment of extraosseous ameloblastomas [11]. Routine follow-up of annual clinical and radiographic examination should be done. In general, annual follow-up for at least 10 years is recommended or annual follow-up until 5 years and every 2 years thereafter for at least 25 years. Use of panoramic view is adequate for monitoring mandibular region. Whereas CT- scans will be superior imaging tool for detecting recurrence in maxillary region. MRI can be recommended as best monitoring imaging tool for both maxillary and mandibular region where ionizing radiation is eliminated [12].



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REFERENCES

- [1] CAR Schuleburg. Adamantinoma- Hunterian lecture delivered at Royal College of Surgeon of England 4th Jan 1951, 329-353.
- [2] Neville BW, Damm DD, Allen CM, Bouqout JE. Odontogenic cysts and tumors, chapter 15, in Oral and maxillofacial pathology 2nd edition, W.B. Saunders company, 2004;611-619.
- [3] Ghandhi D, Ayoub AF, Pogrel MA, MacDonald G, Brocklebank LM & Moos KF. J Oral Maxillofac Surg 2006;64:1010-4.
- [4] Nakamura N, Higuchi Y, Mitsuyasu T, Sandra F & Ohishi M. Oral Surg 2002;93:13-20.
- [5] Ferretti C, Polakow R & Coleman H. J Oral Maxillofac Surg 2000;58:800-4.
- [6] Small IA & Waldron CA. Oral Surg Oral Med Oral Pathol 1955;8:281-97.
- [7] Rapidis AD, Andressakis DD, Stavrianos SD, Faratzis G, Arnogiannaki-Liappi N, Lagogiannis GA, & Valsamis S. E J S O 2004;30:998-1002.
- [8] Marcelo Medeiros et.al, Brazillian J Otohyhinolaryngol 2008;74(3).
- [9] Zachariades N. Int J Oral Maxillofac Surg 1988;17:316-8.
- [10] Olasoji HO, Nggada HA & Tahir AA. Trop Doct 2004;34:112-4.
- [11] Gardner DG. Int J Oral Maxillofac Surg 1988;17:201-5.
- [12] D Hertog, I Van der wall. Oral Oncol 2010;46:61-64.