



POSTERIORLY BASED TONGUE FLAP RECONSTRUCTION FOR RESIDIVE AMELOBLASTOMA IN RETROMOLAR REGION, THE 3rd OPERATION : A CASE REPORT

Surgery

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ABSTRACT

Background: The treatment of the oral cavity tumor is mostly surgical excision with the result of complex defects. Nowadays these defects are reconstructed with free flaps but they are not available in all institutes. Local flaps like tongue flap can be used in selected patients. We present the use of tongue flap in the reconstruction of a large defect of oral retromolar region.

Methods : A 38-year-old man presented with a swelling on the left retromolar region. The lesion was asymptomatic and had been operated several times including segmental mandibulectomy. Intra-oral examination showed a sessile pink to red in color mass in retromolar area. Orthopantomogram (OPG) showed a soft tissue mass without bone destruction. The lesion was diagnosed as a squamous cell carcinoma, by cytologic examination but clinically suspected a peripheral ameloblastoma. Curative surgery was performed and reconstructed with tongue flap.

Results: The postoperative course was uneventful. Surgery-related complications were not found. The final histopathology report was plexiform ameloblastoma.

Discussion : Tongue which is adjacent to the site of excision can be used as it is highly vascular, elastic and central in location but within narrow limits. The principle of tongue flap is equitable redistribution of mucosa from relative abundance on the tongue to an adjoining excisional defect without significantly hampering the functions of the tongue.

Conclusions : Posteriorly based dorsal tongue flap is a good option for certain selected cases. There is no significant morbidity at the donor site, primary closure of the donor area and it is a single staged procedure.

KEYWORDS

Peripheral Ameloblastoma, reconstruction, tongue flap

INTRODUCTION

The prevalence of odontogenic tumors is 0.8% of all oral and maxillofacial tumors. Ameloblastoma accounts for 30% of all odontogenic tumors. Peripheral ameloblastoma (PA) is a rare variant, representing about 2% to 10% of all ameloblastomas.⁽¹⁾

Peripheral ameloblastoma is a benign locally invasive epithelial odontogenic tumor originating from the putative enamel organ of origin. Peripheral ameloblastoma (PA) is an exophytic growing tumor localized to soft tissue in the tooth-bearing areas of the jaw. The initial diagnosis is fibrous epulis.⁽²⁾

To date, less than 200 cases of peripheral ameloblastoma have been described in the literature. Peripheral ameloblastoma (PA) generally occurs at age > 50 years. The ratio of men to women is 2:1. The most common location of ameloblastoma is mandibular. Normal size ranges from a mean of 1.3 cm and in most cases there is no radiological evidence of bone involvement.

Proposed diagnostic criteria for peripheral ameloblastoma include, origin of the epithelium above, presence of odontogenic epithelial islands in the lesion, lack of potential bone infiltration.⁽³⁾

Microscopic picture of peripheral ameloblastoma is characterized by ameloblastic growth in the squamous epithelial layer, the tumor is composed of loosely connected cells.⁽⁴⁾

Tongue flap can be used in select group of patients like: Moderate size defects (3-5 cm), Defects where bone is exposed (marginal mandibulectomy), Defects close to retromolar trigone (RMT) (avoid post-operative trismus). High risk patients (avoid prolonged surgery).⁸

In this report we will report a rare case of peripheral ameloblastoma that occurs in the retromolar buccal region, which has residives after two operations. In this case peripheral Ameloblastoma occurs in 38-year-old men and a lump is found on the left side of the patient's cheek are post resection we cover with posteriorly based lateral tongue flap.

METHODS

A 38-year-old man presented with a swelling on the left retromolar region. The lesion was asymptomatic and had been operated several times including segmental mandibulectomy. Intra-oral examination showed a sessile pink to red in color mass in retromolar area. Orthopantomogram (OPG) showed a soft tissue mass without bone destruction. The lesion was diagnosed as a squamous cell carcinoma, by cytologic examination but clinically suspected a peripheral ameloblastoma. Curative surgery was performed and reconstructed with tongue flap.

Preparation of the recipient site

Excision of the mass in the retromolar region tumor with safety margin 0,5 cm then we frozen Section the free tumor resection. (figure 1)





Preparation of the donor site

Based on the location of the defect post recurrent ameloblastoma excision, the incision design on the tongue differs, without resection of the tip and edge of the tongue.

The incision in the midline of the tongue tip was considered for the beginning of flap elevation. the incision began one centimeter away from the tip and edge of the tongue. Based on the width of the defect, up to 1/3 of the tongue width could be included in the flap design. Full-thickness incision of the tongue from the anterior to the posterior direction creates posteriorly based lateral tongue flap. In such cases, the flap should not extend posteriorly to the circumvalate papilla. Great caution was exercised so that the flap pedicle would not become thin when the incision extended posteriorly [Figure 2].

When there was a need for more width, the elevated flap could be incised from below in longitudinal direction. It converted the thick, narrow flap to a thin wide one. The flap was sutured to the recipient buccal mucosa.

The tongue donor site sutured back again with vicryl 4-0 .

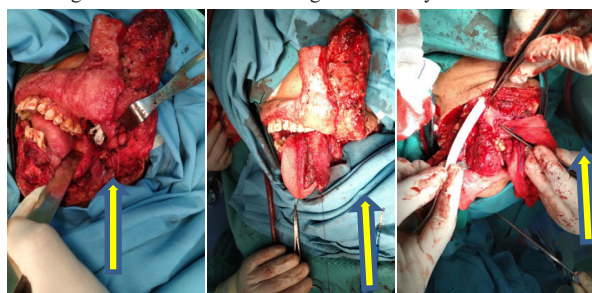
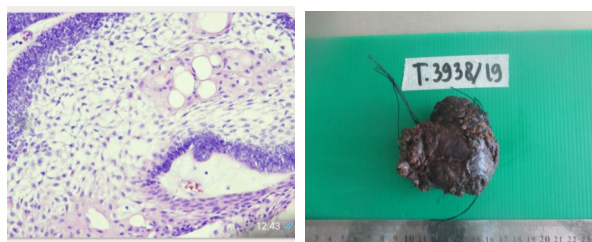


Figure 1 a

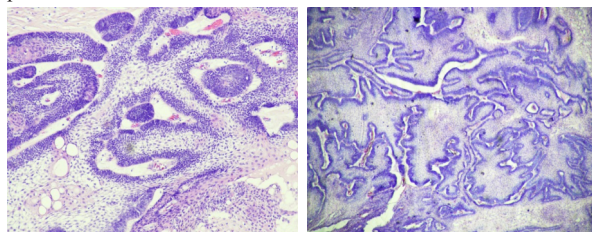
Figure b

Figure c

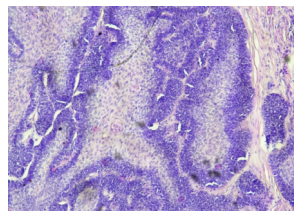
Figure 1: (a) defect .of retromolar region post excision residue ameloblastoma (b) tongue flap paddle forming (c) measuring of the defect area



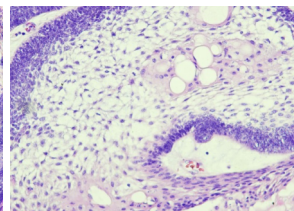
FNAB Microscopic Photos (Squamous cell carcinoma) Macroscopic photos of tumors



Microscopic Photos of cells appear Microscopic photographs are typical palisading arranged at the edges of anastomose trabecular patterns in plexiform type ameloblastoma



Microscopic Photos of oval-nucleated cells are arranged palisading at the edges



Microscopic Photos of oval-nucleated cells are arranged palisading at the edges form the stellate reticulum

RESULTS

Post excision of the residue ameloblastoma flexiform type and reconstruction with posteriorly based lateral tongue flaps was used for retromolar region. the patient still has normal sensory sensations of the tongue. Speech quality did not affected (patient's self-assessment and parents' opinion), the tongue shape smaller but normal in function.

Flap blood supply, in this variant of tongue flap is an axial pattern, depends on branches of the deep lingual artery.[13] It provides sufficient mucosa for coverage of the oral-side in such post excision retromolar tumor region. After operation patients feel improve dramatically after the excision of the retromolar region o/f tumor and closure of the large area post excision , which might be attributed to patients' age and the establishment of eating habits. Posteriorly based tongue flaps have been used for reconstruction of retromolar region tumor excision.

DISCUSSION

Tongue flap used for moderate size defect 3-5 cm but in this case we use for defect > 5 cm , with undermining operation

Posteriorly based tongue flap is a good option for oral-side coverage of retromolar region in selected cases. It does not limit the mobility of remaining tongue, and it is a good choice for reconstruction of retromolar region and no significant morbidity at the donor site It permits primary closure of the donor area without tension and it is a single staged procedure

Thus local flaps are used in those defects which are neither so small too close primarily or split thickness skin graft (SSG) (contraction) nor too large to use free flap (over kill). Mandible in situ reconstruction with pectoralis major myocutaneous flap is difficult and over kill.

Few authors have used flaps from the lateral border of the tongue. The disadvantage of posteriorly based tongue flap for closure of retromolar region is the thick nature of the flap, making it necessary to carry out a third surgery in some cases (in our series 16% of successful flaps) and leading to asymmetrical tongue shape. Reinsertion of maximal muscular bulk is strongly recommended to prevent a postoperative tongue deformity. Width limitation is the other restriction in this variant of tongue flap.

Posteriorly based tongue flap has some advantages, including axial blood supply, not affecting the tongue mobility during the period of flap attachment to retromolar region and the most important factor, simplicity of the technique.

It is a belief that the narrowed donor portion of the tongue enlarges with time because the muscle is usually well- This should be considered before surgery, explained to the patient as well as written consent obtained.

CONCLUSION

Posteriorly based dorsal tongue flap is a good option for certain selected cases. There is no significant morbidity at the donor site, primary closure of the donor area and it is a single staged procedure. Peripheral ameloblastoma is a rare variant, representing about 2% to 10% of all ameloblastomas. Whenever happen to the retromolar region it defect can be repaired by using posteriorly based tongue flap.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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