In-Toto Resection Of Coronoid Process During Mandibular Resection In Oral Squamous Cell Carcinoma- Benefits And Learning.

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Abstract (300 word limit)

Statement of the Problem: Since surgery is the treatment of choice in oral squamous cell carcinoma (OSCC), good reconstruction helps in improved quality of life. In the Indian scenario, gingivobuccal sulcus is the most common site of OSCC. So our unit has a common practice of removing the coronoid process in continuation with resected mandible to provide wide clearance of margins. On reviewing such cases on long-term follow-up, we have noticed many benefits of this technique in both ablation to reconstruction.

Methodology & Theoretical Orientation: A retrospective study was done to review the benefits of this technique and assess the long-term outcome. The data was collected for all patients operated with this technique from February 2015 to January 2020. A total of 42 patients were operated using this technique with average follow up of 24.2 months. Majority of patients had reconstruction with only titanium plate as proper bony reconstruction with fibula free flap was not feasible due to several constraints like lack of manpower, huge patient load, and advance staged disease. All patients had clear posterior bony margins and no recurrence was seen at the proximal stump of mandible. Majority of patients (n-40, 95.2%) had almost normal mouth opening with good functional outcome. Plate fracture was seen in only 2 patients (4.8%) where secondary bone reconstruction was done. All patients had stable occlusion with no rotation of mandibular condyle.

Conclusion & Significance: In-toto removal of coronoid process with the resected mandibular specimen provides many advantages like clear margins, good mouth opening, decreased plate fracture due to detachment of temporalis muscle pull, together with other benefits.

Image

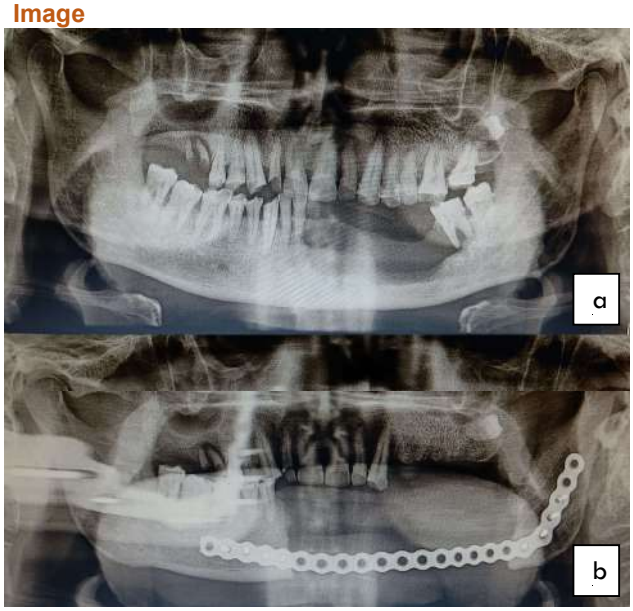


Fig 1: a. Pre-operative orthopantomogram (OPG) of patient 1.
b. Post-operative OPG of the same patient showing resected coronoid process and Titanium reconstruction plate at 3-year follow-up.

Recent Publications (minimum 5)

1. G LN, Chandrasekar M. Role of Prophylactic Coronoidectomy in Oral Cancer Treatment: a Retrospective Cohort Study. Indian J Surg Oncol. 2020 Dec;11(4):735-739.
2. Bhrany AD, Izzard M, Wood AJFN. Coronoidectomy for the treatment of trismus in head and neck cancer patients. *Laryngoscope.* 2007;117(11):1952–1956.
3. Tsai CC, Wu SL, Lin SL, Ko SY, Chiang WFYJ. Reducing trismus after surgery and radiotherapy in oral cancer patients: results of alternative operation versus traditional operation. *J Oral Maxillofac Surg.* 2016;74(5):1072–1083.
4. Toro-Ibacache VOP. The effect of varying jaw-elevator muscle forces on a finite element model of a human cranium. *Anat Rec.* 2016;299(7):828–839.
5. Høgdal N, Juhl C, Aadahl M, Gludd C. Early preventive exercises versus usual care does not seem to reduce trismus in patients treated with radiotherapy for cancer in the oral cavity or oropharynx: a randomised clinical trial. *Acta Oncol.* 2015;54(1):80–87.

Photograph



Biography (150 word limit)

Dr Gupta has both clinical and teaching experience of more than 15 years. At present, he is holding the position of Associate professor and unit in charge of Oral and maxillofacial surgerty at a reputed public funded teaching hospital in northern India. Dr Gupta has expertise in head and neck oncology and microvascular reconstruction. He is one of the few surgeons who have expertise in both ablative and reconstructive surgery. He has completed various international fellowships like Commonwealth fellowship from England, IAOMS fellowship from Shanghai, and AOCMF fellowship from Germany. He has published extensively and has presented his work at various international meetings. He has a passion for saving precious human lives from oral cancer and improving their well-being and quality of life. He has developed a model unit for oral cancer management after getting experience from different international training centers.

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Notes/Comments: