

Reconstruction of Complex Post Oncologic Maxillectomy Defects

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Abstract : Purpose: Maxillary defects are three dimensional and require complex bone and soft tissue reconstruction. Maxillary reconstruction using fibula osteocutaneous flaps in situation requiring orbital floor, orbital wall, palatal defects, and external skin, all at the same time require special planning and multiple osteotomies. We tried to improvise our reconstruction using multiple osteotomies and skin paddle designs for fibula and Flexor Hallucis Longus Muscle. This study aims at discussing the planning and outcome in complex maxillary reconstructions using fibula flaps and soft tissue flaps with or without bone grafts. Material and Methods: From 2011 to 2017 a total of 129 Free fibula flaps were done, 67 required two or more struts, 164 Anterolateral Thigh Flaps, 11 Deep Inferior Epigastric Artery perforator flaps and 3 vertical rectus abdominis muscle flaps with iliac crest bone graft. The age range was 2 to 70 years. The reconstruction was evaluated based on the post-operative rehabilitation including orbital support (prevention of diplopia), oral diet, speech and cosmetic appearance. Results: The follow-up is from 5 years to 1 year. In this series, we observed that the common complications were the de-vascularisation of most distal segment of osteotomised fibula and native skin necrosis. Commonest area of breakdown is the medial canthal region. Plate exposure occurs most commonly at the pyriform sinus. There was extrusion of one non-vascularized bone graft. All these complications were noticed post-radiotherapy. Conclusions: The use of free fibula osteocutaneous flap gives very good results when only alveolar reconstruction is required. The reconstruction of orbital floor with extensive skin loss with post operative radiotherapy has maximum complication rate in long term follow up. A soft tissue flap with non vascularized bone graft may be the best option in such cases.

Keywords : maxilla reconstruction, fibula maxilla, post cancer maxillary reconstruction

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