METHODS: We present a consecutive series of 150 cases (2010-2020). In 75 cases (2015-2020) we used insourced VSP and CAD-CAM for the reconstruction of maxilla-mandibular defects with fibula, iliac crest and scapular angle flaps. Relevant parameters influencing the reconstructive outcome were determined. We compared data with 75 previous reconstructions of the jaw without CAD-CAM (2010-2015). Mann-Whitney U tests and Fisher’s exact tests were used to compare continuous and binary variables between both groups.

RESULTS: We went from a fibula-based protocol, towards the selection of optimal vascularized bone for immediate placement of Osseo integrated implants. Bone flap survival was 94.7% after 4 months. The three-year patient survival is 77.6%. There were no significant prognostic factors for bone flap failure (such as smoking, radiotherapy or previous interventions).

CONCLUSION: In-house VSP and CAD-CAM have evolved into a valuable strategies in maxillo-mandibular reconstruction that promote precision and allow for occlusion-based planning with quality of life, aesthetic outcome and minimizing donorsite morbidity as essential parts of the reconstruction even in high level oral cancers.

P116. RECONSTRUCTION OF LONG TRACHEA DEFECTS BY TRACHEA ALLO-TRANSPLANTATION WITH CESSATION OF IMMUNOSUPPRESSION. LEARNING CURVE AFTER 10 CASES

Winston Wittesaela, MD, Pierre Delaere, MD, PhD, Jan Jeroen Vranckx, MD, PhD

KUL Leuven University Hospitals, Leuven, Belgium.

PURPOSE: The trachea is an enigmatic organ due to its complex morphology and definitive treatment of defects are challenging. Reconstructive options largely depend on the remaining structural cartilaginous support around the defect. For short tracheal defects, we moved from a 2-stage cartilage-prelaminated radial forearm flap, towards a 1-stage mucosa-laminated flap to restore the hollow mucosa-lined lumen. Alternatives are medial condylar flaps, or cartilage-loaded fascia flaps. For long airway defects there are no authentic autologous donor tissues available to restore the mucosa-lined elastic cartilaginous framework consistently. When autologous options are not stable over time, the most promising approach for difficult-to-repair long airway defects is tracheal allotransplantation.

METHODS: We treated 10 patients with long trachea defects, using a compatible donor allogenic trachea that was banked for prefabrication into the forearm of the recipient. We developed a strategy that creates a chimera of allogenic and autologous tissues which results in ‘tolerance’ of the vascularized trachea tube and allows for tapering and withdrawal of immunosuppressive therapy.

RESULTS: Today all patients are alive. Further treatments may consist of laser removal of intraluminal scar tissue, bronchoscopy for broncho-lavage and stents. We report the outcomes and determining treatment factors of these 10 patients and define the hurdle stones and opportunities.

CONCLUSION: Restoration of a long-segment circumferential tracheal defect remains an unmet challenge. Future reports on this subject should be required to provide thoroughly documented visual evidence of outcomes to reduce confusion surrounding tracheal replacement and to prevent future scandals like those seen previously in the tracheal regeneration story.

P117. DUAL FLUORESCENT TRACERS FOR REVERSE LYMPHATIC MAPPING AND SURGICAL GUIDANCE: PREVENTING DONOR SITE ASSOCIATED LYMPHEDEMA IN VASCULARIZED LYMPH NODE TRANSPLANT SURGERY

Irene A. Chang, BA¹, Marco A. Swanson, MD², Meenakshi Rajan, MD², Graham S. Schwarz, MD²

¹Case Western Reserve University School of Medicine, Cleveland, OH, USA, ²Cleveland Clinic Foundation, Cleveland, OH, USA.

PURPOSE: Vascularized lymph node transfer (VLNT) helps to restore physiological lymphatic function. Although effective, postoperative impairment of donor-site lymphatic function and iatrogenic lymphedema following lymph node transfer from the groin remains a concern.

METHODS: Prospective analysis of VLNT patients that had undergone radioisotope-free dual fluorescent tracer assisted harvest was performed from September 2013 to