rare infections of the hand and upper extremity, are thought to be a high-risk reality. This study examines our experience with upper extremity infections (UEI) in the solid organ transplant population to further provide clinical, treatment and outcome data in this growing population of patients, as very limited studies with few patients are available in the literature.

**Methods:** A large tertiary care center institutional database of 16,640 transplant patients was queried for UEI events between years 2005-2017, revealing 238 patients with UEIs, defined by the clinical suspicion of an infectious in an area between the shoulder and fingertip. Multivariable analysis using linear and logistic regression models to assess for the length of hospital stay and the likelihood of surgical intervention were performed using the SPSS software.

**Results:** The mean age at the infection was 54.2 ± 15.1 years of age. The infections were diagnosed at a median of 5 (IQR 10) years after transplantation. The most common infections were diagnosed in patients transplanted with kidneys (51.3%) and livers (19.7%). The most common location of infection was the forearm (31.1%), digits (27.5%), and upper arm (17.2%). The most common infection type was cellulitis (68.9%), abscess (31.9%), joint sepsis (7.0%), infectious tenosynovitis (3.7%), and osteomyelitis (1.1%). By far Staphylococcus Aureus was the most common pathogen cultured (11%). In 15.8% of the patients cultures were negative. In 93.4% of the patients the infection resolved after treatment and in 87.9% there was no recurrence. Only 8.1% of patient had recurrent infections, 3.7% ended up with an unresolved infection, and one mortality due to UEI. Immunosuppression with Tacrolimus or Prednisone were associated with shorter time to infection after transplantation. 43.2% of the patients were treated with IV antibiotics, 23.1% with oral antibiotics. 16.1% of the patients require bed side I&D and 13.9% formal OR debridement. Multivariable analysis revealed that patients with lung and bowel transplants, hypertension and patients on prophylactic anti-fungal medication were associated with a longer hospital stay, while patients on Azathioprine and Sirolimus immunosuppression and azithromycin prophylactic antibiotics were associated with shorter length of hospital stay (P < .001). Abcess, tenosynovitis, and septic joints were associated with higher odds of surgical intervention (P = .001).

**Conclusion:** This data demonstrates high cure rates and low recurrence rates for treatment of upper extremity infections. Based on culture driven data, it suggests that prompt recognition and treatment covering for common bacteria is not unreasonable as a first line. Providers should therefore escalate treatment regimens based on culture driven data. Patients who have been able to reduce their immunosupression regimens to maintenance levels should still be considered high risk for soft tissue infections, and constant vigilance is advised.

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**Posteriorly Based Buccal Artery Myomucosal Flap For Cleft Palate Repair: An Anatomical Study**

*Majid Rezaei, DDS MSc, Brian Figueroa, MD, Richard Drake, PhD, Francis Papay, MD, Bahar Bassiri Gharb, MD, PhD, Antonio Rampazzo, MD, PhD*

*Cleveland Clinic Foundation, Cleveland, OH, USA.*

**Purpose:** The Buccinator myomucosal flap is a versatile flap for lengthening and repair of cleft palate defects. Posteriorly-based pedicled flaps are supplied either by the buccal artery or a branch of the facial artery. Clinical applications of this flap have been well reported in the literature, however few anatomical studies have shed light on the main pedicle and the vasculature within the flap. Therefore, the aim was to study the buccal neurovascular pedicle in order to design a new posteriorly based island flap.

**Methods:** Dissections were performed in 11 fresh adult cadavers. External carotid (3 cadavers) or buccal (8 cadavers) artery was isolated and injected with red latex. In addition, indocyanine green (ICG) was injected directly into the buccal artery in 6 hemifaces and ICG angiography was performed before the application of latex. Entrance of the buccal neurovascular bundle into the flap was localized and marked intra-orally. Diameter of the buccal nerve and artery, flap length (distance from pterygomandibular raphe (PTM) to the corner of the mouth) horizontal distance from PTM to the pedicle entrance, and vertical distance of the pedicle entrance from maxillary tuberosity was measured with a digital caliper. Then, the whole mucosa and underlying soft tissue of the cheek area was harvested and examined with the surgical microscope in order to study the microanatomy of the flap.

**Results:** The mean diameter of buccal artery and nerve was 0.95±0.29 mm and 1.29±0.20 mm, respectively. The Average diameter of the communicating branch with the facial
artery was 0.62±0.22 mm. The mean vertical distance from
the pedicle to the maxillary tuberosity was
11.57±3.87 mm. Flap length was on average 67.51±8.82 mm
and the neurovascular pedicle entered the flap 11.38±2.87 mm
anterior to the PTM, located in the posterior 1:6 of the flap.
Buccal artery and nerve advanced inside the flap as much as
66.8%±6.0% and 67.3%±5.8% of the total flap length. On
average, the buccal artery started branching 3.8±0.8 mm distal
to its entrance point. The mean number of main branches of
buccal artery was 3.25±0.8. There were 2 collateral veins par-
alleling the Buccal artery in the main pedicle. ICG angiogra-
phy showed that 84.8%±13.9% (mean±SD) of the flap length
was instantly vascularized through the buccal arterial system.

**Conclusion:** Our results demonstrated a consistent pres-
ence of the buccal artery in all dissected flaps. Its relatively
large diameter and extensive branching toward the corner
of the mouth, evidenced by ICG angiography, would allow
the harvest of an island flap based only on the buccal artery.
This would avoid a second stage for the division of the ped-
icle of the flap after primary cleft palate repair.

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**Hepatitis B And C Is Associated With
Greater Postoperative Complications
Following Mastectomy And Breast
Reconstruction**

*Olachi O. Oleru, BS1, Ishani D. Premaratne, BA2, Christine H. Rohde, MD, MPH, FACS3*

1*State University of New York (SUNY),
Downstate Medical Center, New York, NY, USA, 2Weill Cornell Medicine, New York, NY, USA, 3Columbia University Medical Center, New York, NY, USA.

**Purpose:** Prior studies have analyzed the effects of Hepa-
titis B and C (HB and HC) on outcomes following hepatic
surgeries. Fewer have investigated this association in plastic
and reconstructive surgeries. We present a large-scale data-
base analysis of outcomes following mastectomy and breast
reconstruction in patients with HB/HC compared to patients
without infectious hepatitis.

**Methods:** Data from the New York State Statewide Planning and Research Cooperative System (NYS SPARCS) from 2008-2013 was queried. Patients with confirmed HB and/or HC who underwent mastectomy and/or breast reconstruction procedures (identified using International Classification of Disease [ICD-9] codes) were compared to propensity-score matched patients without HB or HC who underwent these procedures to assess differences in post-
surgical outcomes. Univariate analysis assessed differences in demograph information, baseline health characteristics, and perioperative factors as possible risk factors. Post-surgical outcomes were assessed by collecting infection rate, re-operation rate, postoperative complications, and length of hospital stay. Multivariate analysis revealed the effects of the possible risk factors on postoperative outcomes.

**Results:** 36,072 patients were identified. The majority (35,898) had no history of HB/HC infection, and 174
patients had documented history of HB/HC. There was no
difference in age between the cohorts (56.3 vs. 56.6 years for
non-HB/HC and HB/HC patients, respectively). The major-
ity of patients were female (98.6% of non-HB/HC, 95.9% of
HB/HC patients, p=0.005). There were significantly more
Black/African American, Native American/Alaska Native,
and Asian patients in the HB/HC cohort (p<0.001). Insur-
ance types also differed with a larger proportion of HB/HC
patients utilizing Medicaid (37.9% vs. 12.0%, p<0.001).
Hepatitis patients had more frequent comorbid HIV/AIDS,
deficiency anemias, chronic pulmonary disease, coagu-
lopathies, depression, diabetes without complications, drug
abuse, hypertension, fluid/electrolyte disorders, psychoses,
and renal failure (p<0.04). These were used as covariates in
the multivariate analysis. HB and HC patients had a higher
incidence of postoperative hemorrhage (8.0% vs. 3.1%,
p<0.01), urinary system complications (1.1% vs. 0.3%,
p=0.030), death during hospitalization (0.6% vs. 0.1%,
p=0.003), and a lengthier overall hospital stay (2.39 vs.
2.84 days, p=0.03). Other complication rates were compa-
rable, including shock, infection, and cardiac, respiratory,
and digestive complications. HB and HC patients were
more likely to have any postoperative complication (10.3%
vs. 5.4%, p=0.004), and to have two or more postopera-
tive complications (1.7% vs. 0.4%, p=0.008). Multivariate
analysis revealed that HB/HC patients had greater odds of
postoperative hemorrhage (OR=2.45, 95% CI 1.39-4.32,
p=0.002) and greater odds of having at least one postopera-
tive complication (OR=1.72, 95% CI 1.04-2.87, p=0.03).

**Conclusion:** Patients with comorbid HB and/or HC had
greater postoperative complications after undergoing mas-
tectomy and breast reconstruction procedures compared to
similar patients without HB and/or HC. They had greater
odds of postoperative hemorrhage and of developing