



## PRACTICE-CHANGING UPDATES

### ARTICLES

- 1 [Antibiotic prophylaxis: current recommendations in plastic surgery](#) FULL ARTICLE ACCESS

*Shana S. Kalaria, Thanapoom Boonipat, J. Michael Smith, Eric L. Cole*

**Eur J Plast Surg. 2019;42(5):481-488**

*PMID: pending*

Guidelines for prophylactic antibiotics in surgery are well-established but few specific to plastic surgery. This literature review summarizes current recommendations of prophylactic antibiotic use to produce consensus guidelines in plastic surgery. Of 143 articles, 9 randomized controlled trials showed a reduction in surgical site infections after antibiotic prophylaxis for specific plastic surgery procedures. There are evidence-based recommendations for prophylactic antibiotics in breast surgery, abdominoplasty, contaminated hand or face surgery, prosthetic surgery, rhinoplasty, microsurgery, as well as acute and burn reconstruction cases. Recent surveys indicate the majority of plastic surgeons continue to use prophylactic antibiotics in clean cases of the hand, face, and body despite recommendations against.

## TECHNOLOGY AND MEDICINE

### ARTICLES

- 1 [Resorbable Implants for Mandibular Fracture Fixation: A Systematic Review and Meta-Analysis](#) FULL ARTICLE ACCESS

*Chocron Yehuda, Azzi Alain J., Cugno Sabrina*

**Plast and Reconstr Surg Glob Open. 2019 Aug;7(8):e2384.**

*PMID: pending*

A systematic review and meta-analysis on overall outcomes using resorbable implants for mandibular fracture fixation vs. that of metallic implants. Outcomes considered were hardware failure/exposure, infection, wound dehiscence, reoperation, malocclusion, and non-union. Subset meta-analysis of prospective studies comparing metallic and resorbable implants was also carried out. Overall complication rate for resorbable implants was 19.8%, with infection and wound dehiscence the most common. Rates of adverse events in the resorbable and metallic groups were a non-statistically-significant difference of 18.0% and 18.3% respectively. The findings suggest no statistical differences in outcomes for patients with mandibular fractures, managed with resorbable or metallic implants.



2 [\*\*Virtual Reality Improves the Patient Experience during Wide-Awake Local Anesthesia No Tourniquet Hand Surgery: A Single-Blind, Randomized, Prospective Study.\*\*](#)

*Hoxhallari E, Behr IJ, Bradshaw JS, Morkos MS, Haan PS, Schaefer MC, Clarkson JHW.*

**Plast Reconstr Surg. 2019 Aug;144(2):408-414.**

PMID: 31348351

Wide-awake local anesthesia no tourniquet surgery decreases cost and hospital length of stay. The authors studied use of virtual reality (VR) during wide-awake local anesthesia no tourniquet outpatient upper extremity surgery to assess its effect on patient pain, anxiety and fun. Patients undergoing this type of surgery were randomized to using VR or not (non-VR) during their procedures. Pain, fun, anxiety, blood pressure and heart rate were measured at various points in time. VR patients had lower anxiety scores during injection, during and at the end of the procedure, as well as higher fun scores compared to the non-VR group. There were no differences in blood pressure, heart rate, or pain scores. Findings demonstrate readily available virtual reality hardware and software can provide an experience reducing patient anxiety both during the injection of LA and the surgical procedure.

## TABLE OF CONTENTS

PRACTICE-CHANGING UPDATES		View Summary	View Article
1	<b>Antibiotic prophylaxis: current recommendations in plastic surgery</b> <small>FULL ARTICLE ACCESS</small>		

TECHNOLOGY AND MEDICINE		View Summary	View Article
1	<b>Resorbable Implants for Mandibular Fracture Fixation: A Systematic Review and Meta-Analysis</b> <small>FULL ARTICLE ACCESS</small>		
2	<b>Virtual Reality Improves the Patient Experience during Wide-Awake Local Anesthesia No Tourniquet Hand Surgery: A Single-Blind, Randomized, Prospective Study.</b>		



	PLASTIC, RECONSTRUCTIVE AND AESTHETIC SURGERY	View Summary	View Article
1	<b>Safe, Effective Chin and Jaw Restoration With VYC-25L Hyaluronic Acid Injectable Gel.</b>		
2	<b>The Cock-up Splint: A Novel Malleable, Rigid, and Durable Dressing Construct for the Post-hypospadias Repair</b> <small>FULL ARTICLE ACCESS</small>		
3	<b>Survival and Disease Recurrence Rates among Breast Cancer Patients following Mastectomy with or without Breast Reconstruction.</b>		
4	<b>Depression is associated with worse outcomes among women undergoing breast reconstruction following mastectomy.</b>		
5	<b>Rectal ketamine during paediatric burn wound dressing procedures: a randomised dose-finding study.</b>		
6	<small>FULL ARTICLE ACCESS</small> <b>Safety of Postoperative Opioid Alternatives in Plastic Surgery: A Systematic Review.</b>		
7	<b>Efficacy of Ear Molding in Infants using the EarWell Infant Correction System and Factors Affecting Outcome.</b> <small>FULL ARTICLE ACCESS</small>		

## PLASTIC, RECONSTRUCTIVE AND AESTHETIC SURGERY

ARTICLES	
1	<p><b><a href="#">Safe, Effective Chin and Jaw Restoration With VYC-25L Hyaluronic Acid Injectable Gel.</a></b>  <i>Ogilvie P, Sattler G, Gaymans F, Belhaouari L, Weichman BM, Snow S, Chawla S, Abrams S, Schumacher A.</i>  <b>Dermatol Surg.</b> 2019 Oct;<b>45(10):1294-1303.</b>                      PMID: 31135570</p> <p>The hyaluronic acid soft-tissue filler with lidocaine, VYC-25L, is designed to restore chin and jaw facial volume. This randomised study evaluated the safety and efficacy of VYC-25L in 119 subjects with chin retrusion. Patients received VYC-25L in the chin/ jaw at study onset (treatment group) or 3 months later (control group). Results showed the mean change in glabella-subnasale-pogonion facial angle from baseline at month 3 was significantly greater in the treatment vs. control group. Global Aesthetic Improvement Scale scores, FACE-Q Satisfaction responses and Psychological Well-Being Scales were also improved in the treatment group. Common injection site responses were firmness, tenderness and swelling. No serious adverse events were noted. VYC-25L significantly improved facial angle and was generally safe and well tolerated.</p>



2 [The Cock-up Splint: A Novel Malleable, Rigid, and Durable Dressing Construct for the Post-hypospadias Repair](#) FULL ARTICLE ACCESS

*Hsieh Michael K. H., Lai, Mun Chun, Azman, Nurazlin M., Cheng, Joanne J. S. H., Lim, Gale J. S.*

**Plast Reconstr Surg Glob Open. 2019 Aug 19;7(8):e2369.**

PMID: 31592386

One of the most innovative yet controversial areas of modern hypospadias surgery is postoperative dressing. Numerous methods and materials have been described and some conclude no dressing may be best for these wounds. Difficulties lie in stabilizing the graft on a soft, mobile, boneless organ subject to dynamic multidimensional changes during erection, keeping the graft clean from fecal and urinary soilage and patient apprehension precluding ease of dressing change. The authors describe a dressing technique using the Denver Splint, which allows expansion while preserving structural integrity, is easily readjustable, provides cushioned pressure for comfort while reducing edema and hematoma, keeps the phallus in a “cocked-up” position for graft stability and shear reduction, lowers risk of 2° contracture and remains pristine at postoperative day 7. The splint is easy to apply and cheap as it can be reused for subsequent dressings in the same patient. 0 graft losses were noted.

3 [Survival and Disease Recurrence Rates among Breast Cancer Patients following Mastectomy with or without Breast Reconstruction.](#)

*Siotos C, Naska A, Bello RJ, Uzosike A, Orfanos P, Euhus DM, Manahan MA, Cooney CM, Lagiou P, Rosson GD.*

**Plast Reconstr Surg. 2019 Aug;144(2):169e-177e.**

PMID: 31348330

Concerns have been raised on the oncologic safety of breast reconstruction following mastectomy for breast cancer. This study analysed data on 1517 women from The Johns Hopkins Hospital comprehensive cancer registry, comparing mastectomy-only (33.2%) to mastectomy with immediate breast reconstruction (66.8%) in breast cancer patients to evaluate differences in breast cancer recurrence and 5-year survival. Results showed a statistically non-significant overall survival benefit associated with breast reconstruction even after adjusting for clinical and socioeconomic variables. Rate of recurrence was similar between both groups. Findings indicate breast construction does not have a negative impact on overall survival or breast cancer recurrence rate.

4 [Depression is associated with worse outcomes among women undergoing breast reconstruction following mastectomy.](#)

*Drinane JJ, Pham TH, Schalet G, Rezak K.*

**J Plast Reconstr Aesthet Surg. 2019 Aug;72(8):1292-1298.**

PMID: 31056434

Much data exists regarding post-breast-reconstruction depression and poorer outcomes, but little regarding whether women with pre-existing depression undergoing breast reconstruction have worse outcomes. The United States National Inpatient Sample was queried during 2010-2013 for all patients undergoing breast reconstruction after mastectomy. Patients with depression at time of breast reconstruction (20.2%) were compared to those who did not at time of breast reconstruction (79.8%). Depression was associated with increased age, length of stay, cost of care, more comorbidities, and higher incidence of pulmonary, hematologic, gastrointestinal, infectious, wound and venous thromboembolic complications. Findings support that co-morbid depression be managed and treated prior to breast reconstruction for optimal patient



outcomes.

5 [Rectal ketamine during paediatric burn wound dressing procedures: a randomised dose-finding study.](#)

*Grossmann B, Nilsson A, Sjöberg F, Nilsson L.*

**Burns. 2019 Aug;45(5):1081-1088.**

PMID: 31060760

Ketamine is used in paediatric procedures worldwide, but no recommendations exist regarding rectal dosing for procedures involving high levels of pain and/or anxiety such as burn wound dressing change. In this study, 90 children aged 6 months-4 years were randomised 1:1:1 to receiving 4mg/kg (K-4 group), 6mg/kg (K-6 group) or 8mg/kg (K-8 group) of racemic ketamine for a maximum of 3 consecutive procedures. 1° outcome was procedural pain based on FLACC behavioural scale. 2° outcomes included feasibility and recovery time. Patient safety was evaluated using surrogate outcomes. Median maximum pain was FLACC 0 in all groups. Feasibility was better for K-6 and K-8 (vs. K-4) but mean recovery time and median maximum sedation was longest for K-8, where 1 child had a drug-related serious adverse event of laryngospasm/ airway obstruction. Results show a rectally administered mixture of ketamine (6mg/kg) and midazolam (0.5mg/kg) during paediatric burn dressing procedures of approximately 30min duration is optimal for pain relief, feasibility, recovery time and patient safety, with no need for rescue analgesedative medication.

FULL ARTICLE ACCESS

6 [Safety of Postoperative Opioid Alternatives in Plastic Surgery: A Systematic Review.](#)

*O'Neill RC, Hayes KD, Davison SP.*

**Plast Reconstr Surg. 2019 Oct;144(4):991-999.**

PMID: 31568318

With the growing opioid epidemic, plastic surgeons are encouraged to transition from postoperative opioids but many hesitate using nonopioid analgesics (e.g. NSAIDs and local anaesthetic blocks) due to concerns such as bleeding. This systematic review assessed the validity of risks associated with nonopioid analgesia. 34 articles from a search of PubMed and MEDLINE databases were included- analysing the safety of ibuprofen, celecoxib, ketorolac, IV acetaminophen, ketamine, gabapentin, liposomal bupivacaine and local and continuous nerve blocks after plastic surgery procedures. No articles found statistically significant bleeding associated with ibuprofen, celecoxib, or ketorolac. IV acetaminophen, ketamine, gabapentin, and liposomal bupivacaine did not carry significantly increased risk of adverse events. Nerve and infusion blocks have low risk of pneumothorax. Despite study limitations (e.g. small sample sizes, different dosing and control groups, >1 medication being studied), this preliminary analysis shows several opioid alternatives have a potential role in postoperative analgesia.



7

## [Efficacy of Ear Molding in Infants using the EarWell Infant Correction System and Factors Affecting Outcome.](#) FULL ARTICLE ACCESS

*Chan SLS, Lim GJS, Por YC, Chiang MF, Ho S, Saffari SE, Chia HL.*

**Plast Reconstr Surg. 2019 Oct;144(4):648e-658e.**

*PMID: 31568305*

1/3 of infants have ear anomalies and <1/3 self-correct. This single-center, 3-year prospective study assessed the EarWell Infant Correction System efficacy in correcting infant ear deformities and determined factors affecting outcomes. Consecutive full-term infants who underwent ear molding with the EarWell system were recruited. 1° outcome was successful ear anomaly correction and 2° outcomes included complications and ear shape maintenance. Factors identified included anomaly type, age at and duration of application and breastfeeding. Of 105 ears studied, 66.7% were deformations and 33.3% malformations. Median age group at presentation was 0-7 days and average application duration 4.1 weeks. 86% achieved successful correction, with anomaly type being the only predictor of successful correction- deformations having significantly higher rate of successful outcome (98%) vs. malformations (64%). Skin complications were common (46%) and attributed to the tropical climate. Patients with complications were of higher mean age (22.1 days) than those without (10.6 days). Results suggest the EarWell system is an effective nonsurgical option for treating ear anomalies.

## SELF-LEARNING MODULES

Check out the Plastic, Reconstructive and Aesthetic Surgery [Self-Learning Modules](#) on the AMS website!

Unlimited attempts, with 5 CME points awarded on successful completion of each module.

