

Techniques and Outcomes for Hand Surgery

Summary of Recent Literature



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KEYWORDS

- Hand surgery literature summary • Pollicization • Toe-To-Hand Transfer • Pedicled Groin Flaps
- Ulnar Neuropathy Decompression • Dupuytren Contracture Correction
- Recurrence Rates Dupuytren Contracture • Invasive Hand Surgery • Signaling Pathways
- TNF Therapeutic Target • Percutaneous Needle Fasciotomy
- Core Competencies in Hand Surgery Training

Abstracts and Commentaries for select hand surgery articles in the recent literature related to surgical techniques and outcomes are provided by Dr David J. Smith, Associate Editor of Year Book of Plastic and Aesthetic Surgery:

What's New in Hand Surgery: Amadio; 2012

Refinements in Pollicization: A 30-Year Experience: Taghnia & Littler; 2012

Toe-To-Hand Transfer: Evolving Indications and Relevant Outcomes: Waljee & Chung; 2013

The Effectiveness of Pedicled Groin Flaps in the Treatment of Hand Defects: Results of 49 Patients: Goertz et al; 2012

Collagen Conduit Versus Microsurgical Neurorrhaphy: 2-Year Follow-Up of a Prospective, Blinded Clinical and Electrophysiological Multicenter Randomized, Controlled Trial: Boeckstyns & Sørensen; 2013

Flexor Tendon Repair, Rehabilitation, and Reconstruction: Sandvall et al; 2013

Trend of Recovery after Simple Decompression for Treatment of Ulnar Neuropathy at the Elbow: Giladi; 2013

Correction of Contracture and Recurrence Rates of Dupuytren Contracture Following Invasive Treatment: Werker et al; 2012

Unraveling the Signaling Pathways Promoting Fibrosis in Dupuytren's Disease Reveals TNF as a Therapeutic Target: Verjee et al; 2013

Percutaneous Needle Fasciotomy for Recurrent Dupuytren Disease: van Rijssen & Werker; 2012

Dosage of Local Anesthesia in Wide Awake Hand Surgery: Lalonde & Wong; 2013

Program Director Opinions of Core Competencies in Hand Surgery Training: Analysis of Differences between Plastic and Orthopedic Surgery Accredited Programs: Sears, Larson, Chung; 2013

These and additional literature summaries and commentaries are published in Year Book of Plastic and Aesthetic Surgery, edited by Stephen Miller, MD. <http://www.elsevier.com/journals/year-book-of-plastic-and-aesthetic-surgery/1535-1513>.

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What's New in Hand Surgery

Amadio PC (Mayo Clinic, Rochester, MN)

J Bone Joint Surg Am 94:569-573, 2012

Background.— The material presented at the 2011 annual meetings of the American Society for Surgery of the Hand (ASSH), the American Association for Hand Surgery (AAHS), and the American Academy of Orthopaedic Surgeons (AAOS) and selected articles in the area of hand surgery were reviewed. Updates were noted in skeletal trauma, tendon injury, replantation and microsurgery, other vascular problems, arthritis, Dupuytren contracture, Kienböck disease, and cost-effectiveness in hand surgery.

Updates.— With respect to skeletal trauma, updates were found in the management of distal radial fracture, bone quality and bone density in osteoporosis screening, intercarpal ligament and cartilage injuries, carpal tunnel release during volar plating of the distal part of the radius, use of simple distal pole excision for posttraumatic arthritis secondary to scaphoid nonunion, scaphoid fractures, and scapholunate injuries. Tendon injury management may be altered by the ability to practice surgical techniques in benchtop simulations and by active mobilization after repair. Access to replantation services is highly inconsistent and offers challenges to many communities. Toe-to-hand transfer techniques all appear to have comparable outcomes.

Raynaud phenomenon may respond to botulinum toxin type A treatment, but sodium hyaluronate, while safe for arthritis of the thumb, appears ineffective. Implants are similarly ineffective as replacements for the base of the thumb metacarpal in terms of strength and motion. Proximal interphalangeal joint arthroplasty remains problematic. Total wrist arthroplasty with an implant produces high patient satisfaction but not always clinically acceptable results. Collagenase for Dupuytren contracture and other minimally invasive approaches appear to be associated with lower rates of recurrence at the metacarpophalangeal joints than at the proximal interphalangeal joints. However, patients appear to be unconcerned with the degree of contracture, which does not correlate strongly with the degree of functional impairment. Interestingly, hand surgeons cannot agree on the radiographic appearance of Kienböck disease, even with their own previous assessments.

It was pointed out that professionals should be aware of the effectiveness of treatments but also of the cost to patients. Formal hand therapy programs often cost more but are no more effective than informal rehabilitation instructions from the surgeon. Repair of hand fractures in a minor surgical suite appears to be safe and effective and costs much less than care delivered in an operating room. Also, field sterility is sufficient for carpal tunnel surgery, saves time and money, and cuts down on waste. Similar findings were related to antibiotics and pain medications, both of which tend to be overly prescribed. Patients end up with extra medication, which poses a risk for inappropriate use.

Conclusions.— Many areas were updated in the annual meetings of the ASSH, AAHS, and AAOS and in hand surgery articles published between August 2010 and July 2011. Keeping abreast of these changes will have an impact on care.

Commentary ► The author reviews material presented at the 2011 annual meetings of the American Society for Surgery of the Hand, American Association for Hand Surgery, and the American Academy of Orthopedic Surgeons as well as articles published in the field of hand surgery (other than those published in *The Journal of Bone & Joint Surgery*) between August 2010 and July 2011. This is an excellent overview for those wanting to stay current in hand surgery but whose practice is not primarily focused in that area.

Refinements in Pollicization: A 30-Year Experience

Taghinia AH, Littler JW, Upton J (St Luke's-Roosevelt Hosp, NY)

Plast Reconstr Surg 130:423e-433e, 2012

The thumb is a specialized organ with unique functions that cannot be replicated by any other digit. The most powerful technique for construction or reconstruction of a lost or missing thumb is index finger pollicization. In this article, the authors outline five technical refinements in this procedure that have evolved over the past 30 years in 313 cases. These refinements improve appearance and function, and include (1) modification of the incisions to produce a well-contoured web space, (2) metacarpal head positioning for

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