

JOURNAL OF SHOULDER AND ELBOW SURGERY

Copyright © 2021 by *Journal of Shoulder and Elbow Surgery* Board of Trustees

CONTENTS

VOLUME 30 • NUMBER 2 • FEBRUARY

The Journal is included in the *Index Medicus* and in MEDLINE

SHOULDER

Reduced psychosocial functioning in subacromial pain syndrome is associated with persistence of complaints after 4 years

- Celeste L. Overbeek, MD, Maaike G.J. Gademan, MSc, Arjen Kolk, MD, Cornelis P.J. Visser, MD, PhD, Peer van der Zwaal, MD, PhD, Jochem Nagels, MD, and Rob G.H.H. Nelissen, MD, PhD, Leiden and The Hague, The Netherlands 223

Are there racial differences between patients undergoing surgery for shoulder instability? Data from the Multicenter Orthopaedic Outcomes Network (MOON) Shoulder Instability Group

- Carolyn M. Hettrich, MD, MPH, Anthony Zacharias, MD, Shannon F. Ortiz, MPH, Philip Westgate, PhD, MOON Shoulder Group, Brian R. Wolf, MD, MS, and Cale Jacobs, PhD, Boston, MA; Lexington, KY; Iowa City, IA, USA 229

Three-dimensional computed tomography analysis of pathologic correction in total shoulder arthroplasty based on severity of preoperative pathology

- Eric T. Ricchetti, MD, BongJae Jun, PhD, Yuxuan Jin, MS, Vahid Entezari, MD, MMSc, Thomas E. Patterson, PhD, Kathleen A. Derwin, PhD, and Joseph P. Iannotti, MD, PhD, Cleveland, OH, USA 237

Multimodal oral analgesia strategy after ambulatory arthroscopic shoulder surgery: case series using adaptive therapeutic approaches by sequential analysis

- Benjamin Garnaud, MD, Olivier Mares, MD, Joel L'hermite, MD, Nathalie Vialles, MD, Yann Gricourt, MD, Ariane Lannelongue, MD, Jean Yves Lefrant, MD, PhD, and Philippe Cuvillon, MD, PhD, Nîmes and Montpellier, France 250

Neuroapraxia and early complications after reverse shoulder arthroplasty with glenoid bone grafting

- Eric R. Wagner, MD, Andres R. Muniz, MD, Michelle J. Chang, BS, Tyler Hunt, BS, Kathryn M. Welp, MS, Jarret M. Woodmass, MD, FRCSC, Laurence Higgins, MD, MBA, and Neal Chen, MD, Atlanta, GA; Boston, MA; Kansas City, MO; Erie, PA, USA; Winnipeg, MB, Canada; and Hamilton, Bermuda 258

Continued on Page 4A

Publication information. *Journal of Shoulder and Elbow Surgery* (ISSN: 1058-2746) is published monthly by Elsevier Inc., 360 Park Avenue South, New York, NY 10010-1710. Business and Editorial Offices: 1600 John F. Kennedy Blvd., Suite 1800, Philadelphia, PA 19103-2899. Elsevier Customer Service Office: 3251 Riverport Lane, Maryland Heights, MO 63043. Periodicals postage paid at New York, NY and additional mailing offices.

USA POSTMASTER: Send address changes to Elsevier, Journal Returns, 1799 Highway 50 East, Linn, MO 65051.

CONTENTS

CONTINUED

The effect of body mass index on internal rotation and function following anatomic and reverse total shoulder arthroplasty	265
Josef K. Eichinger, MD, Meghana V. Rao, BS, Jackie J. Lin, BS, Jonathan B. Goodloe, MD, Venkatraman Kothandaraman, BS, William R. Barfield, PhD, Stephen A. Parada, MD, Christopher Roche, MSE, MBA, and Richard J. Friedman, MD, FRCSC, Charleston, SC; Augusta, GA; Gainesville, FL, USA	265
Comparison of outcomes after reverse shoulder arthroplasty in patients with rheumatoid arthritis and cuff tear arthropathy	273
Young-Hoon Jo, MD, Sung Hoon Choi, MD, Il-Han Joo, MD, Sihoon Choi, MD, Soo-Young Jeong, MD, and Bong Gun Lee, MD, PhD, Guri and Seoul, Republic of Korea	273
Short-term outcomes of arthroscopic partial repair vs. latissimus dorsi tendon transfer in patients with massive and partially repairable rotator cuff tears	282
Laurent Pascal Baverel, MD, Nicolas Bonnevieille, MD, PhD, Thierry Joudet, MD, Philippe Valenti, MD, Jean Kany, MD, Jean Grimberg, MD, Floris van Rooij, MSc, and Phillippe Collin, MD, Saint-Grégoire, Toulouse, Libourne, Paris, and St Jean, France; and Nyon, Switzerland	282
Relationship between humeral retroversion and baseball positions during elementary and junior-high school	290
Akihiko Hasegawa, MD, PhD, Teruhisa Mihata, MD, PhD, Yasuo Itami, MD, PhD, Atsushi Takeda, PT, and Masashi Neo, MD, PhD, Takatsuki, Japan	290
Mid-term outcomes of reverse shoulder arthroplasty using the alternative center line for glenoid baseplate fixation: a case-controlled study	298
Ryan Colley, DO, Teja S. Polisetty, BS, and Jonathan C. Levy, MD, Fort Lauderdale, FL, USA	298
Risk factors for failure of reduction of anterior glenohumeral dislocation without sedation	306
Ryogo Furuhata, MD, Yusaku Kamata, MD, Noboru Matsumura, MD, PhD, Aki Kono, MD, and Hideo Morioka, MD, PhD, Tokyo, Japan	306
Intravenous tranexamic acid vs. topical thrombin in total shoulder arthroplasty: a comparative study	312
Elshaday S. Belay, MD, Jeffrey O'Donnell, MD, Etienne Flamant, BS, Zoe Hinton, BS, Christopher S. Klitto, MD, and Oke Anakwenze, MD, MBA, Durham, NC, USA	312
The relationship of bilateral shoulder arthroplasty timing and postoperative complications	317
Jordan D. Walters, MD, Patrick J. Denard, MD, Stephen F. Brockmeier, MD, and Brian C. Werner, MD, Charlottesville, VA; Medford, OR, USA	317
Natural history of glenoid bone loss in primary glenohumeral osteoarthritis: how does bone loss progress over a decade?	324
Anthony L. Logli, MD, Ayoosh Pareek, MD, Ngoc Tram V. Nguyen, BS, and Joaquin Sanchez-Sotelo, MD, PhD, Rochester, MN, USA	324
Results of an innovative method of intramedullary fixation for displaced 4-part fractures of the proximal humerus in patients younger than 70 years	331
Sanjay Desai, MS, DNB, MCh, DOrth, Rohit Jain, MBBS, MS, and Vishwajeet Singh, MBBS, DNB, MRCSEd, Mumbai, India	331

Continued on Page 6A

CONTENTS

CONTINUED

Cost comparison of arthroscopic rotator cuff repair with arthroscopic vs. open biceps tenodesis

Steven F. DeFroda, MD, MEng, Lambert Li, BS, John Milner, BS, Steven L. Bokshan, MD, and Brett D. Owens, MD, Providence, RI, USA 340

ELBOW

Return to play and performance after surgical repair of distal biceps tendon ruptures in National Football League athletes

Nicholas R. Pagani, MD, Matthew I. Leibman, MD, and Michael S. Guss, MD, Boston and Newton, MA, USA ... 346

Suture anchor reinsertions of distal biceps rupture: a histologic analysis of a torn tendon and clinical results at short- and long-term follow-up

Pierfrancesco Luciani, MD, Luca Farinelli, MD, Elisa Senigagliesi, MD, Nicola Setaro, MD, Sandra Manzotti, BS, and Antonio Gigante, MD, Ancona, Italy 352

Evaluation of anterior oblique ligament tension at the elbow joint angle—a cadaver study

Yusuke Matsuura, MD, PhD, Takashi Takamura, MMSc, Shiro Sugiura, PhD, Yoshiyuki Matsuyama, MD, PhD, Takane Suzuki, MD, PhD, Chisato Mori, MD, PhD, and Seiji Ohtori, MD, PhD, Chiba, Japan 359

Biodegradable magnesium vs. polylactide pins for radial head fracture stabilization: a biomechanical study

Ferdinand C. Wagner, MD, Larissa Polossek, MD, Tayfun Yilmaz, MD, Martin Jaeger, MD, Dirk Maier, MD, PhD, Matthias J. Feucht, MD, PhD, Norbert P. Südkamp, MD, PhD, and Kilian Reising, MD, PhD, Freiburg, Munich, Hamburg, Germany 365

BASIC SCIENCE

β_3 -Adrenergic receptor agonist treats rotator cuff fatty infiltration by activating beige fat in mice

Zili Wang, MD, Xuhui Liu, MD, Mengyao Liu, BA, Kunqi Jiang, MD, Shingo Kajimura, PhD, Hubert Kim, MD, PhD, and Brian T. Feeley, MD, Changsha, China; San Francisco, CA, USA 373

Relationship between fatty infiltration and gene expression in patients with medium rotator cuff tear

Se-Young Ki, MD, Yong-Soo Lee, PhD, Ja-Yeon Kim, MS, Taewoo Iho, MD, and Seok Won Chung, MD, PhD, Seoul and Seongnam, Republic of Korea 387

The effects of restricted glenohumeral horizontal adduction motion on shoulder and elbow forces in collegiate baseball pitchers

Kevin Laudner, PhD, ATC, Regan Wong, PT, CSCS, Daniel Evans, PT, CSCS, and Keith Meister, MD, Colorado Springs, CO; Arlington, TX, USA 396

Subacromial bursal preservation can enhance rotator cuff tendon regeneration: a comparative rat supraspinatus tendon defect model study

Yucheng Sun, MD, PhD, Jae-Man Kwak, MD, Erica Kholine, MD, PhD, Kyoung-Hwan Koh, MD, PhD, Jun Tan, MD, PhD, and In-Ho Jeon, MD, PhD, Nantong, China; Seoul, Republic of Korea; and Jakarta, Indonesia .. 401

Continued on Page 8A

CONTENTS

CONTINUED

Measurement of the coracohumeral distance on magnetic resonance imaging in a large patient cohort

- Jonathan D. Hodax, MD, MS, Kalpit N. Shah, MD, Scot E. Campbell, MD,
Kenneth L. Cameron, PhD, MPH, ATC, and Brett D. Owens, MD, Providence, RI; San Antonio, TX;
West Point, NY, USA 408

Does commercially available shoulder arthroplasty preoperative planning software agree with surgeon measurements of version, inclination, and subluxation?

- Brandon J. Erickson, MD, Peter N. Chalmers, MD, Patrick Denard, MD, Evan Lederman, MD,
Gabriel Horneff, MD, Brian C. Werner, MD, Matthew T. Provencher, MD, and Anthony A. Romeo, MD,
New York, NY; Salt Lake City, UT; Medford, OR; Phoenix, AZ; Chalfont, PA; Charlottesville, VA;
Vail, CO, USA 413

In vivo reverse total shoulder arthroplasty contact mechanics

- Madeleine L. Van de Kleut, BMSc, Chaithanya Nair, Jaques S. Milner, BESc, David W. Holdsworth, PhD,
George S. Athwal, MD, FRCSC, and Matthew G. Teeter, PhD, London, ON, Canada 421

How can we define clinically important improvement in pain scores after biceps tenodesis?

- Yining Lu, MD, Alexander Beletsky, BA, Jorge Chahla, MD, PhD, Bhavik H. Patel, MD, Nikhil N. Verma, MD,
Brian J. Cole, MD, MBA, and Brian Forsythe, MD, Rochester, MN; Chicago, IL, USA 430

REVIEW ARTICLES

Crossed versus lateral K-wire fixation of supracondylar fractures of the humerus in children: a meta-analysis of randomized controlled trials

- Oreste Lemos Carrazzone, MD, Nacime Salomão Barbachan Mansur, MD,
Fábio Teruo Matsunaga, MD, PhD, Marcelo Hide Matsumoto, MD, PhD, Flávio Faloppa, MD, PhD,
João Carlos Bellotti, MD, PhD, and Marcel Jun Sugawara Tamaoki, MD, PhD, São Paulo, Brazil 439

Determining the rate of full-thickness progression in partial-thickness rotator cuff tears: a systematic review

- Saho Tsuchiya, MD, Erin M. Davison, MD, MSc, Mustafa S. Rashid, MB, ChB, MSc, PhD,
Aaron J. Bois, MD, MSc, FRCSC, Justin LeBlanc, MD, MSc, FRCSC, Kristie D. More, MSc, and
Ian K.Y. Lo, MD, FRCSC, Calgary, AB, Canada; and Oxford, UK 449

ONLINE ARTICLES

Thirty-day readmissions and reoperations after total elbow arthroplasty: a national database study

- Holt S. Cutler, MD, Garen Collett, MD, Farzam Farahani, BS, Juhno Ahn, BS, Paul Nakonezny, PhD,
Daniel Koehler, MD, and Michael Khazzam, MD, Dallas, TX, USA e41

Comparison of machine learning techniques to predict unplanned readmission following total shoulder arthroplasty

- Varun Arvind, BS, Daniel A. London, MD, MS, Carl Cirino, MD, Aakash Keswani, MD, and
Paul J. Cagle, MD, New York, NY, USA e50

Continued on Page 10A

CONTENTS

CONTINUED

Deltoid muscle contribution to shoulder flexion and abduction strength: an experimental approach

Andreas Hecker, MD, José Aguirre, MD, Urs Eichenberger, MD, Jan Rosner, MD, Martin Schubert, MD, Reto Sutter, MD, Karl Wieser, MD, and Samy Bouaicha, MD, Zürich and Bern, Switzerland e60

Chronic, persistent fungal shoulder arthropathy secondary to genetic mutation: a case report

Thamer Alraiyes, MD, FRCSC, Stephen Petis, MD, FRCSC, Darren Drosdowech, MD, FRCSC, and Marie-Eve LeBel, MD, MHPE, FRCSC, London, ON, Canada e69

Osteochondral autograft transplantation for the treatment of steroid-induced osteonecrosis of the humeral head: a case report

Akihiko Hasegawa, MD, PhD, Teruhisa Mihata, MD, PhD, Hiroyuki Shimizu, MD, Naoto Kuno, MD, and Masashi Neo, MD, PhD, Takatsuki, Osaka, Japan e76

READER SERVICES

Information for Readers	12A
Information for Authors	13A

Disclaimer

Practitioners and researchers must always rely on their own experience and knowledge in evaluating and using any information, methods, compounds or experiments described herein. Because of rapid advances in the medical sciences, in particular, independent verification of diagnoses and drug dosages should be made. To the fullest extent of the law, no responsibility is assumed by the American Shoulder and Elbow Surgeons for any injury and/or damage to persons or property as a matter of products liability, negligence or otherwise, or from any use or operation of any methods, products, instructions, or ideas contained in the material herein.