The Journal of Arthroplasty xxx (2017) 1–11

Contents lists available at ScienceDirect

The Journal of Arthroplasty

journal homepage: www.arthroplastyjournal.org

ACR/AAHKS Guidelines for Perioperative Management
Special Article

2017 American College of Rheumatology/American Association of Hip and Knee Surgeons Guideline for the Perioperative Management of Antirheumatic Medication in Patients With Rheumatic Diseases Undergoing Elective Total Hip or Total Knee Arthroplasty

Susan M. Goodman [a, *], Bryan Springer [b], Gordon Guyatt [c], Matthew P. Abdel [d], Vinod Dasa [e], Michael George [f], Ora Gewurz-Singer [g], Jon T. Giles [h], Beverly Johnson [i], Steve Lee [j], Lisa A. Mandl [a], Michael A. Mont [k], Peter Sculco [a], Scott Sporer [l], Louis Stryker [m], Marat Turgunbaev [n], Barry Brause [a], Antonia F. Chen [o], Jeremy Gililland [p], Mark Goodman [q], Arlene Hurley-Rosenblatt [r], Kyriakos Kirou [a], Elena Losina [s], Ronald MacKenzie [a], Kaleb Michaud [t], Ted Mikuls [u], Linda Russell [a], Alexander Sah [v], Amy S. Miller [n], Jasvinder A. Singh [w], Adolph Yates [q]

[a] *Susan M. Goodman, MD, Lisa A. Mandl, MD, MPH, Peter Sculco, MD, Barry Brause, MD, Kyriakos Kirou, MD, Ronald MacKenzie, MD, Linda Russell, MD: Hospital for Special Surgery/Weill Cornell Medicine, New York, New York*
[b] *Bryan Springer, MD: OrthoCarolina Hip and Knee Center, Charlotte, North Carolina*
[c] *Gordon Guyatt, MD: McMaster University, Hamilton, Ontario, Canada*
[d] *Matthew P. Abdel, MD: Mayo Clinic, Rochester, Minnesota*
[e] *Vinod Dasa, MD: Louisiana State University, New Orleans*
[f] *Michael George, MD: University of Pennsylvania, Philadelphia*
[g] *Ora Gewurz-Singer, MD: University of Michigan, Ann Arbor*
[h] *Jon T. Giles, MD, MPH: Columbia University, New York, New York*
[i] *Beverly Johnson, MD: Albert Einstein College of Medicine, Bronx, New York*
[j] *Steve Lee, DO: Kaiser Permanente, Fontana, California*
[k] *Michael A. Mont, MD: Cleveland Clinic, Cleveland, Ohio*
[l] *Scott Sporer, MD: Midwest Orthopaedics at Rush, Chicago, Illinois*
[m] *Louis Stryker, MD: University of Texas Medical Branch, Galveston*

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This Article is published simultaneously in *Arthritis Care & Research* and *Arthritis & Rheumatology*.
Supported by the American College of Rheumatology and the American Association of Hip and Knee Surgeons.
Drs. Goodman and Springer contributed equally to this work. Drs. Singh and Yates contributed equally to this work.
Dr. Springer has received honoraria from Ceramtec (less than $10,000) and consulting fees from Stryker Orthopaedics and Convatec (more than $10,000 each). Dr. Abdel owns stock in Imagen Technologies. Dr. Giles has received consulting fees from Genentech (less than $10,000). Dr. Johnson has received consulting fees from TREG (less than $10,000). Dr. Lee has received consulting fees from EMD Serono (less than $10,000). Dr. Mandl has received consulting fees from UpToDate (less than $10,000). Dr. Sporer has received consulting fees from DJO Surgical Products (more than $10,000), and from OsteoRemedies and PixarBio (less than $10,000 each). Dr. Losina has received honoraria as Deputy Editor of *Journal of Bone and Joint Surgery* (more than $10,000). Dr. MacKenzie has received consulting fees from ArmadaHealth (less than $10,000). Dr. Mikuls has received consulting fees from Pfizer (less than $10,000) and research grants from Astra Zeneca and Bristol-Myers Squibb. Dr. Sah has received speaking fees and/or honoraria from Pacira, Medtronic, Zimmer Surgical Specialties, and Convatec (less than $10,000 each) and from Smith & Nephew and Mallinckrodt (more than $10,000 each). Dr. Singh has received consulting fees from Takeda (more than $10,000) and from Savient, Regeneron, Merz, Iroko, Bioiberica, Crealta/Horizon, Allergan, WebMD, and UBM LLC (less than $10,000 each), research grants from Takeda and Savient, and was principal investigator for an investigator-initiated study funded by Horizon through a grant to Dinora (more than $10,000).

* Address correspondence to Susan M. Goodman, MD, Hospital for Special Surgery/Weill Cornell, 535 East 70th Street, New York, NY 10021.
E-mail address: goodmans@hss.edu (S.M. Goodman).

http://dx.doi.org/10.1016/j.arth.2017.05.001
0883-5403/

[n] Marat Turgunbaev, MD, MPH, Amy S. Miller: American College of Rheumatology, Atlanta, Georgia
[o] Antonia F. Chen, MD, MBA: Rothman Institute, Thomas Jefferson University Hospital, Philadelphia, Pennsylvania
[p] Jeremy Gililland, MD: University of Utah, Salt Lake City
[q] Mark Goodman, MD, Adolph Yates, MD: University of Pittsburgh, Pittsburgh, Pennsylvania
[r] Arlene Hurley-Rosenblatt, ANP: Rockefeller University, New York, New York
[s] Elena Losina, PhD: Brigham and Women's Hospital, Boston, Massachusetts
[t] Kaleb Michaud, PhD: National Data Bank for Rheumatic Diseases, Wichita, Kansas and University of Nebraska Medical Center, Omaha
[u] Ted Mikuls, MD, MSPH: University of Nebraska Medical Center, Omaha
[v] Alexander Sah, MD: Dearborn-Sah Institute for Joint Restoration, Fremont, California
[w] Jasvinder A. Singh, MBBS, MPH: University of Alabama at Birmingham

ARTICLE INFO

Article history:
Received 26 September 2016
Accepted 28 April 2017
Available online xxx

Objective: This collaboration between the American College of Rheumatology and the American Association of Hip and Knee Surgeons developed an evidence-based guideline for the perioperative management of antirheumatic drug therapy for adults with rheumatoid arthritis (RA), spondyloarthritis (SpA) including ankylosing spondylitis and psoriatic arthritis, juvenile idiopathic arthritis (JIA), or systemic lupus erythematosus (SLE) undergoing elective total hip (THA) or total knee arthroplasty (TKA).
Methods: A panel of rheumatologists, orthopedic surgeons specializing in hip and knee arthroplasty, and methodologists was convened to construct the key clinical questions to be answered in the guideline. A multi-step systematic literature review was then conducted, from which evidence was synthesized for continuing versus withholding antirheumatic drug therapy and for optimal glucocorticoid management in the perioperative period. A Patient Panel was convened to determine patient values and preferences, and the Grading of Recommendations Assessment, Development and Evaluation methodology was used to rate the quality of evidence and the strength of recommendations, using a group consensus process through a convened Voting Panel of rheumatologists and orthopedic surgeons. The strength of the recommendation reflects the degree of certainty that benefits outweigh harms of the intervention, or vice versa, considering the quality of available evidence and the variability in patient values and preferences.
Results: The guideline addresses the perioperative use of antirheumatic drug therapy including traditional disease-modifying antirheumatic drugs, biologic agents, tofacitinib, and glucocorticoids in adults with RA, SpA, JIA, or SLE who are undergoing elective THA or TKA. It provides recommendations regarding when to continue, when to withhold, and when to restart these medications, and the optimal perioperative dosing of glucocorticoids. The guideline includes 7 recommendations, all of which are conditional and based on low- or moderate-quality evidence.
Conclusion: This guideline should help decision-making by clinicians and patients regarding perioperative antirheumatic medication management at the time of elective THA or TKA. These conditional recommendations reflect the paucity of high-quality direct randomized controlled trial data.

Introduction

Although the wide utilization of disease-modifying antirheumatic drugs (DMARDs) and biologic agents has improved the quality of life for patients with rheumatoid arthritis (RA), spondyloarthritis (SpA), juvenile idiopathic arthritis (JIA), or systemic lupus erythematosus (SLE), rates of total hip arthroplasty (THA) and total knee arthroplasty (TKA) remain high [1-6]. Patients with rheumatic conditions report significant improvement in pain and function after THA or TKA, yet critical outcomes such as infection, dislocation, and readmission are reported to be higher for patients with RA, SpA, or SLE [7-10] compared to patients with osteoarthritis. At the time of arthroplasty in a high-volume orthopedic hospital, 46% of RA patients were receiving biologic agents, 67% were receiving nonbiologic DMARDs, and 25% were receiving glucocorticosteroids, while 75% of patients with SLE were receiving immunosuppressive medications, and 15% were receiving glucocorticosteroids. The optimal strategy to manage these medications is not known [11-14]. Inherent risk factors for infection, such as overall disability and disease activity/severity, may not be modifiable, but the optimal perioperative management of immunosuppressant therapy around the time of arthroplasty may present an opportunity to mitigate risk [15-19].

In this setting, clinicians require guidance regarding perioperative management of antirheumatic drug therapy. Direct evidence, however, which addresses perioperative management is sparse [20,21]. To our knowledge, there are no randomized controlled trials (RCTs) evaluating the cessation and reintroduction of biologic agents at the time of THA or TKA. The relevant outcomes considered for these guidelines are the potential increase in infection risk added by the medications versus the risk of disease flare when the medications are withheld. This guideline pertains only to adult patients with RA, SpA including ankylosing spondylitis (AS) and psoriatic arthritis (PsA), JIA, or SLE, who are undergoing elective THA or TKA, and incorporates patient preferences.

This guideline addresses management of antirheumatic medication in those adult patients with diagnoses of RA, SpA, JIA, or SLE, but is not limited to those who meet classification criteria. This guideline is to be used for those who have elected and have been deemed appropriate candidates for THA or TKA. We would caution against extrapolation of this guideline to other orthopedic procedures until further data are available.

This guideline is intended for use by clinicians, including orthopedists, rheumatologists, and other physicians performing perioperative risk assessment and evaluation, as well as patients. The guideline addresses common clinical situations, but may not apply in all exceptional or unusual situations. It is imperative that open and informed communication between the patient, orthopedic surgeon, and rheumatologist takes place. In addition, while