

ACR/AAHKS Recommendations for Perioperative Management of Rheumatic
Disease Medications in Total Joint Arthroplasty of the Hip and Knee

Public Comments

*The ACR/AAHKS Recommendations for Perioperative Management of Rheumatic Disease Medications in Total Joint Arthroplasty of the Hip and Knee Public Comment was posted on the ACR website February 24, 2016. The announcement was e-mailed to the Practice Guidelines Subcommittee, Quality of Care Committee, ACR Board of Directors and an e-blast to the ACR/ARHP membership. **Twelve (12)** responses were received via the online form; **five (5)** responses were received via additional outreach. The public comment period closed on March 24, 2016.*

RESPONSES RECEIVED ONLINE:

- **Name:** Brian Mandell
- **Institution:** Cleveland Clinic
- **Position:** Chairman of Academic Medicine
- **Disclosure (optional):** Nothing to disclose

Comment:

1. The effect of continuing/discontinuing NSAID therapy (selective and non-selective) should be included - this is a common issue - on perioperative complications and pain control. There are small studies addressing this, although a few are perhaps "tainted."
2. Since many patients undergo TJA for osteoarthritis, gout is a common co-morbidity, thus management of gout should also be included.
3. I would like to see at the end of the project specific recommendations be made (perhaps in the form of funded RPFs) for the conduct of appropriately designed studies to answer the 2-3 most compelling clinical questions as generated by the project team; as it seems likely that the strength of data supporting any specific recommendations are likely to be low.
4. Given the controversy generated by some recommendations put forth by other societies on anticoagulation in the perioperative setting, should this be included?

- **Name:** Maureen Dubreuil
- **Institution:** Boston University School of Medicine
- **Position:** Assistant Professor of Medicine
- **Disclosure (optional):** Nothing to disclose

Comment:

NSAIDs are a mainstay of treatment for patients with spondyloarthritis, and currently recommended as first-line treatment. Many patients with spondyloarthritis may go on to require THA related to spondyloarthritis damage, or THA/TKA for unrelated reasons (osteoarthritis). While it is reasonable to withhold NSAIDs during the immediate perioperative period to prevent risk of bleeding, there is little data to my knowledge that withholding NSAIDs for weeks or months postoperatively is warranted. Because NSAID use confers symptomatic and functional benefit, and may also prevent progression of bony ankylosis in spondyloarthritis patients, please consider addressing the use of NSAIDs post THA/TKA in this population specifically, if not addressed in the general population.

ACR/AAHKS Recommendations for Perioperative Management of Rheumatic
Disease Medications in Total Joint Arthroplasty of the Hip and Knee

Public Comments

- **Name:** Luis Torregrosa
- **Institution:** Beaumont Health
- **Position:** N/A
- **Disclosure (optional):** Nothing to disclose

Comment:

My only recommendation is that unicompartmental knee arthroplasty also needs to be included. I agree wholeheartedly that this is not a procedure to be done on patients with IA/SLE, but it is still been done on those patients out in the community. Otherwise, congratulations on undertaking this VERY needed project. It is impossible to convince some orthopedic surgeons currently that patients need to be off medications for very extended periods both pre and post arthroplasty.

- **Name:** Erick Adrian and Zamora Tehozol
- **Institution:** Mexican Institute of Social Security
- **Position:** Chief Rheumatology Resident
- **Disclosure (optional):** Nothing to disclose

Comment:

Page 12, Line 399. There is increasing evidence about the recommendation of double standard dose of steroid before surgery, oral or intravenous. I think we can stand against the sole use of Hydrocortisone perioperative because of the risk of electrolyte misbalance. Every patient should get tested and classified for the risk for acute adrenal insufficiency, the recommendations of Hicks et al, categorizes patient in four groups:

1. Patients with normal adrenal function (documented serum cortisol 0.18 mg/dL).
2. Patients with low risk of adrenal suppression: patients who have been taking exogenous corticosteroids of any dose for less than 3 weeks or chronic prednisone less or equal to 5 mg daily.
3. Patients with probable adrenal suppression: patients who are currently taking prednisone less or equal to 20 mg daily for 3 weeks or more or patients with a Cushingoid appearance.
4. Patients with intermediate or unclear adrenal suppression: patients with a history of prolonged (more than 3 wk) corticosteroid exposure (prednisone more than 20 mg daily) during the past year or patients with sustained use of prednisone 5 to 20 mg daily.

The group proposes these recommendations:

1. Patients without adrenal suppression: these patients do not require extra corticosteroid supplementation in the perioperative period.
2. Patients with adrenal suppression: patients taking supra physiologic (equal or more than 20 mg prednisone per day) corticosteroids dosing for at least 3 weeks preoperatively should be assumed to have HPA axis suppression will likely need additional corticosteroid supplementation in the preoperative period when undergoing major surgery. These patients should be treated with additional perioperative corticosteroid coverage (i.e., higher doses than their preoperative regimen) perioperatively. Patients with presumed adrenal suppression undergoing minor surgery (e.g., local excision, examination under anesthesia, ileostomy reversal) should not require additional treatment aside from preoperative steroid dosing.

ACR/AAHKS Recommendations for Perioperative Management of Rheumatic
Disease Medications in Total Joint Arthroplasty of the Hip and Knee

Public Comments

3. Patients with intermediate or unclear adrenal suppression: patients with intermediate or unclear HPA axis function (prednisone 5-20 mg daily) should be considered for preoperative HPA axis testing to determine whether they fall under the guidelines for group 1 or 2, as mentioned in the original paper is published by Hicks, et al in Inflammatory Bowel Diseases in January 2015. DOI: 10.1097/MIB.000000000000185.

- **Name:** Barry Brause
- **Institution:** Hospital for Special Surgery
- **Position:** Director, Infectious Diseases
- **Disclosure (optional):** Nothing to disclose

Comment:

Page 13; line 457. The Center for Disease Control (CDC) uses a slightly different prednisone equivalent level (<20 mg prednisone daily for 2 weeks or more) to define a patient population receiving relatively low dose glucocorticoid therapy related to degree of immunosuppression. For instance, the CDC allows patients to receive a live vaccine, Zostavax, if the patient is receiving <20 mg of prednisone equivalent daily but not if they are receiving 20 mg or more daily (for >2 weeks). This CDC recommendation has been published for several years but I do not know if it is data-based. So, the guideline group may wish to consider which of these two doses should be defining as “low dose glucocorticoid therapy.”

- **Name:** Kevin Lyons
- **Institution:** Rheumatology Nurses Society
- **Position:** Executive Director
- **Disclosure (optional):** Nothing to disclose

Comment:

As experts in rheumatology nursing, the Rheumatology Nurses Society (RNS) recognizes the need for education of the interdisciplinary team caring for the rheumatology patient who is undergoing total hip and or total knee arthroplasty. When facing surgery, patients often receive conflicting advice from multiple disciplines. Rheumatology nurses can be a valuable liaison between the disciplines to synthesize the information and give the patient clear guidance in order to improve outcomes, decrease adverse events, and increase patient satisfaction. Comprehensive nursing management of the rheumatology patient undergoing surgery includes, but is not limited to: Reinforcement of disease state education; Pre- and Post-operative care unique to the rheumatic disease patient; Optimization of vaccines prior to surgery; Fatigue management; Flare interventions; Increased risk of infection (medications versus disease state); Education of cortisol related complications; Medication education including when/if to start and stop; Evaluation of psychosocial needs; Differentiation of pain (surgical versus disease state); Evaluation of patient resources and support systems (rehab facility and home services); Signs and symptoms of infection – lower threshold for intervention; Maintenance of skin integrity. The RNS offers its support in the development of guidelines for the education of nurses involved in the care of the rheumatology patient undergoing surgery. Sincerely, RNS Board of Directors
Iris Zink, MSN, RN, ANP-BC President

ACR/AAHKS Recommendations for Perioperative Management of Rheumatic
Disease Medications in Total Joint Arthroplasty of the Hip and Knee

Public Comments

- **Name:** David Jevsevar
- **Institution:** AAHKS/AAOS
- **Position:** Evidence Based Practice Committee
- **Disclosure (optional):** AAOS Board of Directors

Comment:

The terms consensus and evidence are used together when discussing the final plan for making a recommendation. Is the final plan to use the evidence to craft the recommendation, or the consensus of the members? What is the plan if no evidence is available? Will drugs within a class be treated similar drugs in that class, or will each drug require a specific piece of evidence to be included in the recommendation? How will reliability and consistency of evidence grading be assessed?

- **Name:** John Cush
- **Institution:** Baylor Research Institute
- **Position:** Director of Clinical Rheumatology
- **Disclosure (optional):** Nothing to disclose

Comment:

Here are my additions to the current scope of work you propose:

b1. Define the consequences of disease flare (for those in the surgical setting and those not in surgical setting. (Flares are bad; but how bad? Do they lead to more damage, more risk, etc. Flare consequences can be ascertained w/ drug d/c or even in those without drug d/c)

4a. Analyze the optimal timing of discontinuation and resumption of NSAIDs.

4c. Assess the rationale and impact of existing international guidelines on biologic cessation.

5b. Develop recs for the prevention of post-operative flares of crystal arthritis.

6. Specify differences in recommendations between patients with RA and other forms of inflammatory autoimmune arthritis and SLE for perioperative medication management.

Consider: Differences according to patient age, comorbidity index/severity. ALSO: What is the morbid or mortal risk surrounding surgery imposed by the diagnosis of RA, OA, SLE or gout? Is the risk further augmented by disease activity or drug therapy. Guidance on perioperative hydration or anemia management. Guidance on the safety of single versus dual TKA or THA. What is the role of pre-surgical preparation ("pre-hab") in reducing operative risk and optimizing functional outcomes? What is the timing, magnitude and schedule for rehab PT for postoperative THA and TKA?

- **Name:** Talha Khawar
- **Institution:** Loma Linda University Medical Center
- **Position:** Fellow
- **Disclosure (optional):** Nothing to disclose

Comment:

I would like to recommend that we look into any data for use of TNFi/other biologic therapy in patients (RA, PsA, AS, etc.) who have had surgical correction for bone fractures (not just arthroplasties). Any recommendations would be helpful in managing such patients peri-operatively in collaboration with orthopedic surgeons.

ACR/AAHKS Recommendations for Perioperative Management of Rheumatic
Disease Medications in Total Joint Arthroplasty of the Hip and Knee

Public Comments

- **Name:** Creighton Tubb
- **Institution:** Brooke Army Medical Center/U.S. Army
- **Position:** Fellow
- **Disclosure (optional):** Employed by the U.S. Government. Committee positions with AAOS and AAHKS. No financial relationships.

Comment:

I appreciate the overall scope of this plan and it's execution as delineated. No further comments.

- **Name:** Lisa Suter
- **Institution:** Yale University
- **Position:** Associate Professor
- **Disclosure (optional):** Nothing to disclose

Comment:

I have reviewed the proposed plan for developing guidelines for the perioperative management of DMARDs in THA/TKA and think they are well outlined and rigorous. I endorse the use of the GRADE methodology and I applaud the collaborative effort between ACR and AAHKS. I have no edits or proposed changes to offer.

- **Name:** John FitzGerald
- **Institution:** UCLA
- **Position:** Chief of Rheumatology
- **Disclosure (optional):** Nothing to disclose

Comment:

Project looks well designed. Nicely presented. Clear to follow. No additional comments/suggestions. My compliments to the lead investigators.

RESPONSES RECEIVED VIA ADDITIONAL OUTREACH:

- **Name:** Michael Schiff
- **Institution:** University of Colorado School of Medicine
- **Position:** Clinical Professor of Medicine, Rheumatology Division
- **Disclosure (optional):** Nothing to disclose

Comment:

I think the plan looks "right on." Will abstracts be included in this review or only peer review published papers? As you know a great deal gets presented a year or more before published. Also is there a way to capture the need for post op steroid increases for these patients? Discussion of steroid trade off versus staying on biologics would be great to see.

ACR/AAHKS Recommendations for Perioperative Management of Rheumatic
Disease Medications in Total Joint Arthroplasty of the Hip and Knee

Public Comments

- **Name:** Michael Weinblatt
- **Institution:** Partners Healthcare
- **Position:** Co-Director, Clinical Rheumatology, Associate Director, Center for Arthritis and Joint Diseases
- **Disclosure (optional):** Nothing to disclose

Comment:

Very nice proposal. How will you handle specific issues like the spine surgeons and ankle and foot surgeons? They want PTS off NSAIDs and MTx and biologics for months. Will you be surgeons for their practice? You may want to for their buy in. As you the literature is pretty terrible and much of what is done is evidence based.

- **Name:** Maxime Dougados
- **Institution:** Hôpital Cochin
- **Position:** N/A
- **Disclosure (optional):** Nothing to disclose

Comment:

First of all, I would like to congratulate you, but also ACR and AAHKS for proposing/selecting/supporting this initiative. Obviously the final results will be of huge interest for the entire rheumatological community. I would like to also congratulate for the optimal methodology you plan to follow.

My single detailed comments are the following:

1. The description of the step after the Systematic Literature Research (SLR)

I have well understood that you will perform a SLR based on specific questions. However, I have not understood how you will make the link between these results (usually not presented in an optimal way to provide recommendations) and THE recommendations (usually short sentences “bullets” and/or a figure). Do you plan a meeting with only the expert panel?

2. The background

I have been very interested (but also very intrigued) by the statements related to the “rate” of THA and TKA. I can understand that the absolute number of patients with THA and TKA might increase (close correlation to the increase in THA and TKA in patients with osteoarthritis) BUT I had in mind that the risk of requirement of TKA or THA was decreasing in the last decade thanks to the new available therapies. Could I suggest to clarify since the rheumatologists might be suspicious of the rest of the initiative if they do not buy or trust or understand your background.

3. The study drug

3.a. Low dose corticosteroids

The description of the dose of corticosteroids can refer to an absolute one (e.g. mg/day) or to a relative one (e.g. mg/kilo/day). In my country, we prefer to refer to the relative one but I am aware that a lot of doctors are referring to the absolute one. In my country an “acceptable” low dose is defined as less than 0.1 mg/kilo/day. In Europe, at the EULAR level, there was a debate of the definition of an absolute “low” dose. The debate consisted in the comparison of 5 mg versus 7 mg... but never 15 mg. Could I recommend that you evaluate at least 2 cut-offs (15 mg and 5 or 7.7 mg) ?

ACR/AAHKS Recommendations for Perioperative Management of Rheumatic
Disease Medications in Total Joint Arthroplasty of the Hip and Knee

Public Comments

3.b. NSAIDs

It might be of interest to evaluate such drugs since frequently taken by patients with spondyloarthritis.

- **Name:** Tim McAlindon
- **Institution:** Tufts Medical Center
- **Position:** Chief, Division of Rheumatology; Professor, Tufts University School of Medicine
- **Disclosure (optional):** Nothing to disclose

Comment:

Well I would say that this looks like a well thought through plan and especially nice is the low number of PICO questions – the lit review team will thank you for that! Some thoughts I have are whether there are a re few other peri-op scenarios that you might need to think about, e.g. use of prophylactic antibiotics etc.; and whether you might need to accommodate different strategies for different drugs i.e. steroids, MTX, biologics; and whether there would be merit in switching drugs before surgery.

- **Name:** Arthur Kavanaugh
- **Institution:** University of California San Diego
- **Position:** Professor of Clinical Medicine
- **Disclosure (optional):** Nothing to disclose

Comment:

Certainly this is an important question. A few comments:

1. I would not include SLE. I think there are very few TJR in SLE compared with RA. However...they are very different than the patients with arthritis. Moreover, whereas the need for TJR is usually end stage OA related to past inflammation, in SLE it includes AVN, which may be an important variable. I don't think you lose much by leaving them out.
2. I have not done a literature search...but my sense as a practicing rheumatologist who tries to keep up with this topic, there is not much literature. I do not think there are any randomized controlled studies, so the few studies that are available are anecdotal and subject to bias. I think much of the discussion will have to be based on expert opinion. GRADE works well in some circumstances...but much less so for safety as compared to efficacy.
3. I think for the biologics, you may focus on pk/pd (how many t1/2 prior to TJR was the disease stopped) to help make educated expert opinion.
4. It may be worthwhile to look at the IBD experience, not for TJR, but for other operations.
5. Wound healing, and the question of when to re-start a therapy, seems to be as important a question as when to stop prior to surgery.