

Evidence in Action

Searching for Evidence-Based Treatment Options in a Busy Practice

By James C. Boysen, DC, MS

CLINICAL SCENARIO: One of your older patients has knee pain and asks, “Is there anything that can be done about it?”

You have confirmed your 56-year-old patient has osteoarthritis (OA) of the knee, and you’ve ruled out other sources of pain. Your patient wants to know what management options are likely to help manage his condition. Since he did not indicate a preference for any specific therapy, it leaves you with a challenge: How do you, in your busy practice, investigate all the evidence-based interventions available for osteoarthritic knee pain?



The Cochrane Collaboration

While searching the evidence may seem like an unreasonable undertaking of your valuable time, there are easy ways to quickly find the information you are looking for. With the availability of technology, you may even be able to do it while the patient is still in the room. The answer is the Cochrane Collaboration, an independent, not-for-profit organization whose mission is “to promote evidence-informed health decision-making by producing high-quality, relevant, accessible systematic reviews and other synthesized research evidence.”

The Cochrane Collaboration is a global network of 37,000 health care practitioners in 130-plus countries. For more than 20 years, they have been promoting evidence-based health care decisions using strict, systematic reviews of updated evidence to provide guidelines that practitioners and patients can use. These systematic reviews use stringent methods aimed at minimizing bias. Their summaries include an “Authors’ Conclusions” of the findings, located in the abstract, that you can understand without a research background. Should you want a simpler explanation for the patient, the Cochrane Collaboration provides a “Plain-Language Summary” in the manuscript.

You decide to do a search in the Cochrane Library’s website and type in the search terms “knee osteoarthritis.” You initially see 55 total articles and then sort by date to see what has been reviewed in the last five years. You scan the list of titles to see if any would be of interest to you and your patient. You are particularly looking for reviews that involve conservative care.

The Results: You found 10 articles outlining management strategies that may help guide decisions related to your patient’s condition. The Cochrane Collaboration’s rigid standards give you an objective overview of the best available evidence for managing the pain from knee osteoarthritis. You begin by sifting through the authors’ conclusions at the bottom of the abstracts. The conclusions from the Cochrane reviews briefly summarize risks and benefits of the interventions.

- The first one, “Braces and orthoses for treating osteoarthritis of the knee,” states the “Evidence was inconclusive for the benefits of bracing for pain, stiffness, function and quality of life in the treatment of patients with medial compartment knee OA.”¹

- The second article, “Chondroitin for osteoarthritis,”² suggests this supplement was better than a placebo in improving pain in short-term studies.

- The third article, “Exercise for osteoarthritis of the knee,”³ indicates “land-based therapeutic exercise provides short-term benefit.”

- The next article, “Osteotomy for treating knee osteoarthritis,”⁴ reveals that although surgery reduces pain, there is no evidence to show it is more effective than nonoperative treatment.

- The fifth article is titled “Oral or transdermal opioids for osteoarthritis of the knee or hip.”⁵ The conclusion is the risk of adverse effects contrasts with the small benefit in pain reduction.

- The next article, “Topical herbal therapies for treating osteoarthritis,”⁶ concludes arnica gel and comfrey extract may improve symptoms, but insufficient studies are available.

- The next article, “Doxycycline for osteoarthritis of the knee or hip,”⁷ concludes this antibiotic used to slow cartilage degeneration has a nonex-

Dr. James C. Boysen is a research clinician, Palmer Center for Chiropractic Research, Palmer College of Chiropractic, Davenport, Iowa.

istent symptom benefit and the benefit of saving cartilage does not outweigh the risk.

- The conclusion of “Joint lavage for osteoarthritis of the knee”⁸ is that there is no benefit in pain relief or functional improvement.

- The next article, “Therapeutic ultrasound for osteoarthritis of the knee or hip,”⁹ suggests this modality may be beneficial.

- And the last article to fall within your designated five-year limit, “Acupuncture for peripheral joint osteoarthritis,”¹⁰ suggests small benefits that do not reach clinical relevance.

The Next Step: You now have some discussion points regarding treatment for knee osteoarthritis. You can talk with your patient about how some home therapies such as chondroitin, exercise, and topical treatments involving arnica gel or comfrey may decrease pain, are low cost and show few adverse events. Braces may also be considered since they are a low-cost option with little risk, but effectiveness is questionable. Other treatments, such as therapeutic ultrasound or acupuncture, may also be of benefit. You do not recommend joint lavage or referral for doxycycline due to lack of benefit and higher risk of adverse events. An orthopedic consult for a possible osteotomy may be appropriate if early conservative management does not provide the relief the patient is seeking, but this should be considered as a last option since these procedures are inherently more invasive.

You can also let your patient know your search may not have included every option available. There may be some past, present or emerging treatments that have not been vigorously evaluated. Your patient now has several options for types of treatment/therapies that you can both discuss.

At this point, your patient may want to have a more specific conversation about the effectiveness of each management option; this information appears in the “Results” section of each of the articles. After a choice of treatment direction is established, further investigation of this choice can be researched to see if it is appropriate for your patient. Given your experience, skill, knowledge of the patient and his history and his preferences, you now have the third leg of an evidence-based practice decision: the literature!

The Takeaway: For more than 20 years, the Cochrane Collaboration has been helping researchers, health care providers and patients with evidence-based choices for treatment. By

trusting this organization as a resource for your practice, you may be able to use the Cochrane reviews as an efficient tool for sifting through the many possibilities of evidence-based treatment options for given conditions. ■

References

1. Duivenvoorden T, Brouwer RW, van Raaij TM, Verhagen AP, Verhaar JA, Bierma-Zeinstra SM. Braces and orthoses for treating osteoarthritis of the knee. *Cochrane Database Syst Rev* 2015;3:CD004020.
2. Singh JA, Noorbaloochi S, MacDonald R, Maxwell LJ. Chondroitin for osteoarthritis. *Cochrane Database Syst Rev* 2015;1:CD005614.
3. Fransen M, McConnell S, Harmer AR, Van der Esch M, Simic M, Bennell KL. Exercise for osteoarthritis of the knee. *Cochrane Database Syst Rev* 2015;1:CD004376.
4. Brouwer RW, Huizinga MR, Duivenvoorden T, et al. Osteotomy for treating knee osteoarthritis. *Cochrane Database Syst Rev* 2014;12:CD004019.
5. da Costa BR, Nuesch E, Kasteler R, et al. Oral or transdermal opioids for osteoarthritis of the knee or hip. *Cochrane Database Syst Rev* 2014;9:CD003115.
6. Cameron M, Chrubasik S. Topical herbal therapies for treating osteoarthritis. *Cochrane Database Syst Rev* 2013;5:CD010538.
7. da Costa BR, Nuesch E, Reichenbach S, Juni P, Rutjes AW. Doxycycline for osteoarthritis of the knee or hip. *Cochrane Database Syst Rev* 2012;11:CD007323.
8. Reichenbach S, Rutjes AW, Nuesch E, Trelle S, Juni P. Joint lavage for osteoarthritis of the knee. *Cochrane Database Syst Rev* 2010;CD007320.
9. Rutjes AW, Nuesch E, Sterchi R, Juni P. Therapeutic ultrasound for osteoarthritis of the knee or hip. *Cochrane Database Syst Rev* 2010;CD003132.
10. Manheimer E, Cheng K, Linde K, et al. Acupuncture for peripheral joint osteoarthritis. *Cochrane Database Syst Rev* 2010;CD001977.



ACA Connects: Your Link to News, Resources and More

ACA CONNECTS is a biweekly e-newsletter (published every other Wednesday) that brings ACA members the latest news on national issues affecting the chiropractic profession, as well as information and resources to help DCs tackle the challenges of modern practice. *ACA Connects* also links members to education opportunities such as ACA's monthly webinar series and offers ideas on ways to engage with ACA, other DCs and health care groups through social media and events. Get informed. Get engaged. Get connected! (If your email address has changed recently, please make sure ACA has the correct contact information by emailing memberinfo@acatoday.org).