

Specific Question:

In adults with ankle OA is hyaluronic acid injection better than no treatment or conservative treatment, for pain, function, and patient satisfaction?

Clinical bottom line

A Cochrane Systematic review suggests that hyaluronic acid is not better than no treatment or conservative treatment for ankle OA. The review suggests that there is uncertainty over the benefit of hyaluronic acid for the treatment of ankle osteoarthritis compared to placebo. Hyaluronic acid injections might be conditionally recommended when simple analgesics have failed

There is insufficient data to create a synthesis of the evidence as a base for future guidelines on the use of hyaluronic acid injections as part of the management for ankle OA. Further Research is required to ascertain its benefits and risks.

Why is this important?

The management of ankle OA continues to be a challenge for clinicians. Previous CAT questions have identified poor evidence regarding conservative ankle OA management versus no treatment and surgical solutions. Hyaluronic acid injection is a treatment intervention currently available on the NHS in some areas. It is important to establish best clinical practice and therefore assess the current available evidence on hyaluronic injections to assist healthcare commissioners as well as practitioners in the allocation and clinical reasoning of treatment.

Search timeframe (e.g. 2006-2016)

Inclusion Criteria

	Description	Search terms (In the final document this should be a combination of your clinical and librarian search terms)
Population and Setting	Adults with ankle OA within primary or secondary care setting	Adults, OA, osteoarthritis, lower limb, talocrural joint, joint pain

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Date: July 2018

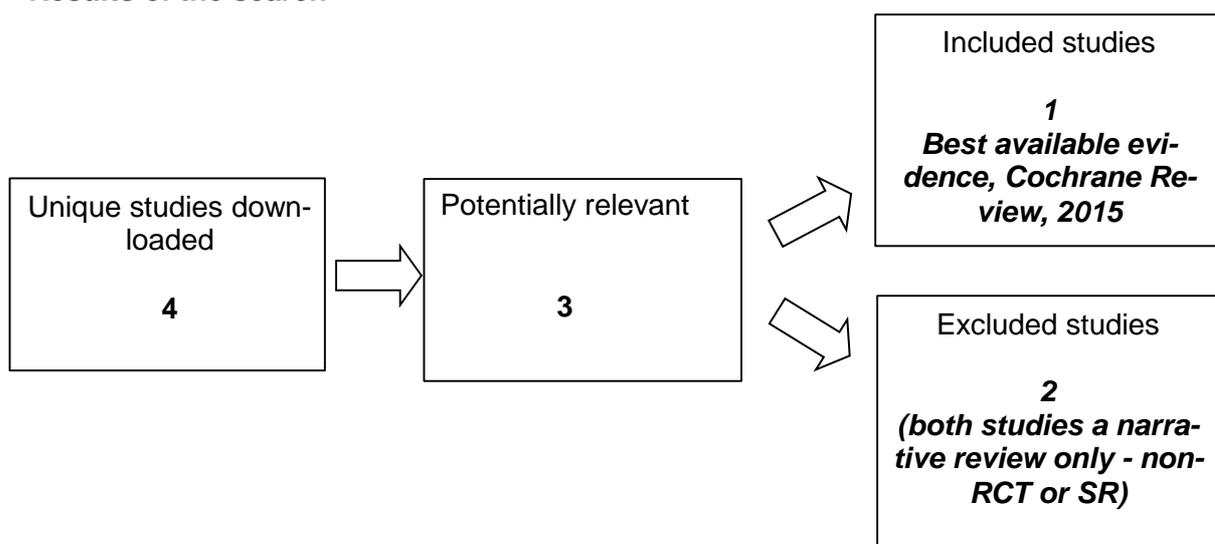
Intervention or Exposure	Hyaluronic injections	Hyaluronic injections
Comparison, if any	Conservative treatment	physiotherapy, exercise, conservative management, advice, leaflets, education, heat, ice, cryotherapy, hands-on, manual therapy, stretches, strengthening, weight loss, NSAIDS, pain killers, acupuncture, insoles, brace, rocker sole
Outcomes of interest	Visual analogue scale, ROM, quality of life, function	Pain, visual analogue scale, quality of life, ROM, function, return to work
Types of studies	RCT and SR	RCT and SR

Routine Databases Searched

Clinical Knowledge Summaries, PEDro, BMJ Updates, Clinical Evidence, TRIP, Database, NICE, HTA, Bandolier, The Cochrane Library, Medline, Cinahl, Embase, PsycInfo, Professional websites. Joanna Briggs Institute, Web of science, Sports discus and Pub med

Date of search- April 2018

Results of the search



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Date CAT to be reviewed: July 2020
Date CAT: July 2018:

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Table 1 - Detail of included study

First Author, year and type of study	Population and setting	Intervention or exposure tested	Study results	Assessment of quality and comments
<p>Witteveen et al. 2015</p> <p>Cochrane Review</p>	<p>A total of 240 adult (over 18 years old) participants with the diagnosis of symptomatic ankle osteoarthritis (OA) (primary or secondary)</p> <p>Diagnosis based on well-described clinical criteria e.g. the American College of Rheumatology (ACR) criteria, or based on a previously taken X-ray, which was classified using either the Kellgren Lawrence or the Van Dijk scale</p> <p>6 RCT's Included</p>	<p>3x RCT compared HA to placebo - 2x studies pooled for analysis of improvement in pain and physical function using Ankle OA Scale (AOS)</p>	<p>AOS total score at 6 months was 12.53 points lower mean difference) in favor for HA (95% confidence interval -23.84 to -1.22).</p>	<p>Low quality evidence due to unclear risk of bias in study design and low number of participants (N=45)</p>
		<p>1x RCT compared HA to exercise therapy</p>	<p>VAS (0 to 10) pain score at 12 months are inconclusive (MD 0.70, 95% CI -2.54 to 1.14). The American Orthopedic Foot and Ankle Society score was 13.10 points median difference higher in favor of HA (95% CI 2.97 to 23.23) on a scale of 0 to 100.</p>	<p>Low quality evidence due to unclear risk of bias in study design and low number of participants (N=30)</p>
		<p>1x RCT compared HA combined with exercise therapy with intra-articular injection of botulinum toxin</p>	<p>AOS pain score at 6 months inconclusive (MD 0.10, 95% CI -0.42 to 0.62) AOS disability score at 6 months inconclusive (MD 0.20, 95% CI -0.34 to 0.74)</p>	<p>Low quality evidence due to unclear risk of bias in study design and low number of participants (N=75)</p>
		<p>1x RCT compared 4 different dosages of HA</p>	<p>Best median decrease in pain on walking VAS (on a scale of 0 to 100) for 3 x 1 ml at 27 weeks with a median decrease of 30. Physical function, radiographic changes and quality of life were not measured.</p>	<p>Moderate quality of evidence due to small same size (N=26)</p>

Summary

It is unclear if there is a benefit or harm for hyaluronic acid injections as a treatment for ankle OA compared to placebo at six months based on low quality of evidence. Inconclusive results were found comparing hyaluronic acid injections to other conservative treatments (Witteveen et al. 2015).

Overall, the current level of evidence shows serious limitations and currently there is insufficient data to create a synthesis of the evidence as a base for future guidelines on the use of hyaluronic injections for ankle OA (Witteveen et al. 2015).

Implications for Practice/research

Further, larger, more robust studies are required to identify if hyaluronic injections are statistically more effective in addressing levels of pain and function when compared to placebo or other conservative measures for the management of adult ankle OA

Hyaluronic acid injections might be conditionally recommended when simple analgesics have failed (Witteveen et al. 2015).

What would you tweet? (140 characters)

Promising results for the use hyaluronic injections in symptomatic ankle OA but need better-quality studies to establish efficacy.

References

Witteveen A, Hofstad C, Kerkhoffs G (2015) Hyaluronic acid and other conservative treatment options for osteoarthritis of the ankle. *Cochrane Database of Systemic Reviews*; 10