Getting Evidence into Clinical Practice:
Musculoskeletal Research Facilitation Group (CAT Group)
Date: February 2018

Specific Question:

In adults with ankle Osteoarthritis (OA) A is total ankle replacement/fusion/debridement better than no treatment for pain and function, risks and harms and adverse events?

Clinical bottom line

At present, there are no studies that compare surgical intervention with no treatment for the management of patients with ankle OA. Due to the lack of evidence of comparing no treatment with surgical intervention for pain and function, risks and harms and adverse events, then clinical practice should remain unchanged.

Within the available evidence, it is apparent that surgical intervention in the form of arthrodesis (fusion) is the standard treatment for ankle OA. Previously, arthroplasty (total ankle replacement) has traditionally revealed disappointing results, but more encouraging results are beginning to be shown with the use of more modern implants. Joint preservation techniques such as debridement could offer some relief in the younger patients with early OA without compromising the use of arthrodesis or arthroplasty in the future.

Why is this important?

A previous CAT question which looked to determine whether conservative treatment in the form of exercise/physiotherapy/rehabilitation was more effective than surgical intervention, revealed no direct comparison studies to answer the question. This question was then selected to determine whether surgical intervention would be better than no treatment to help formulate a local pathway for the treatment of adults with ankle OA and guide clinical practice.

Search timeframe (e.g. 2007-2017)

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		Adults, ankle OA, ankle osteoarthritis, degenerative changes

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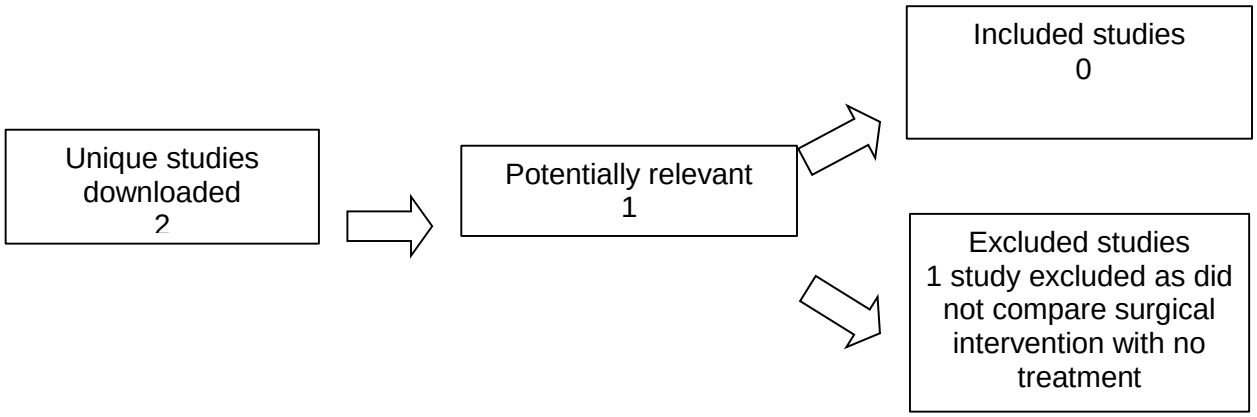
Intervention or Exposure Surgical intervention in the form of either joint sparing or joint sacrificing surgery.		joint sparing surgery, joint sacrificing surgery, arthroplasty, arthrodesis, debridement, fusion, total ankle replacement, chondrolasty, cheilectomy, TAR
Comparison, if any No treatment		No treatment
Outcomes of interest Pain, function, risks and harms, adverse events.		Pain, function, risks and harms, adverse events
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,CochraneLibrary,Medline,Cinahl,Embase,PsycInfo, Professional websites. Joanna Briggs Institute, Web of science, Sports discus and Pub med

Date of search- January 2018

Results of the search



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Summary

At present, the option of no treatment has not been directly compared to surgical intervention possibly due to difficulties of gaining ethical approval for the provision of no treatment. Consequently, surgical intervention remains the standard treatment of ankle OA.

Ankle osteoarthritis is a relatively common orthopaedic presentation but still less prevalent than hip or knee osteoarthritis. In comparison to hip or knee osteoarthritis, trauma is predominantly a preceding risk factor in the development of ankle osteoarthritis and in particular the involvement of the posterior malleolus (Bloch et al., 2015). The congruency and stable nature of the ankle joint allows the transmission of high peak contact stresses and even with quality articular reconstruction following an ankle fracture, the severity of the initial injury will change the congruency of the ankle, increasing the forces across the ankle and accelerating degeneration (Bloch, et al., 2015).

The standard surgical intervention for the treatment of pain in ankle OA is arthrodesis which can achieve successful union rates and patient satisfaction outcomes (Bloch et al., 2015). Although Total Ankle Arthroplasty has been in existence since the 1970's, there have been high failure rates in the past due to the implants poor ability to restore normal anatomy and alignment and joint kinematics (Bloch et al., 2015). More modern implants have been designed that address this problem with clinical outcomes in the short and medium term revealing AOFAS scores as good or excellent and the vast majority of patients being satisfied with their surgery (Bloch et al., 2015). For younger patients who have early signs of osteoarthritis, joint preservation surgery in the form of debridement, chondroplasty and cheilectomy is the preferred choice of surgical intervention to provide some relief without compromising future joint sacrificing interventions, with better results seen in ankles with no joint space narrowing compared to those with some loss of joint space (Bloch et al., 2015).

Implications for Practice/research

At present there is no evidence that no treatment would be better than surgical intervention for ankle osteoarthritis. Temporizing measures such as analgesia, physiotherapy and injections have been treatments of choice for the conservative management of ankle osteoarthritis until the patient requires surgical intervention (Bloch et al., 2015). Developing a pathway locally for the management of patients with suspected ankle osteoarthritis and in particular who have a previous history of trauma to that ankle would be advantageous to enable standardisation of the treatment of ankle OA across the county.

What would you tweet? (140 characters)
'In patients with ankle OA, there is no available evidence to determine whether no treatment is better than surgical intervention.'

References

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Bloch B, Srinivasan S, Mangwana J. (2015) Concepts in the Management of Ankle Osteoarthritis: A Systemic Review. The Journal of Foot and Ankle Surgery; 54: 932 - 939 in hyperlink to references if you can to help clinicians find the evidence

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