Response to conservative treatment for CMC osteoarthritis is associated with conversion to surgery

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Conclusion

- Decrease in pain during conservative treatment strongly decreased conversion to surgery.
- Change in function was not associated with conversion to surgery.
- This study quantitatively supports current guidelines to start with conservative treatment before discussing the option to receive surgical treatment, even if the pain at baseline is very high.

Background

- For symptomatic carpometacarpal (CMC) osteoarthritis (OA) of the thumb, treatment guidelines advise to start with conservative treatment before considering surgery.
- However, it is unknown to which extent the decision to convert to surgery is based on actual, quantifiable improvements in pain and function during conservative treatment.

Objective

To study the relationship between the response to conservative treatment in terms of pain and functioning and the probability of converting to surgery for patients with CMC osteoarthritis.

Methods

- 701 patients were included and received three months of hand therapy and an hand orthosis.
- Pain and functioning were measured with the Michigan Hand Questionnaire (MHQ) at baseline, six weeks and three months. Conversion to surgery was recorded from clinical records.
- Joint modelling was used to study the relationship between the response to conservative treatment and conversion to surgery.

Results

- Change in MHQ-pain score during conservative treatment significantly influenced conversion to surgery, while function did not.
- Patients who ended with mild pain after three months had very low probability of converting to surgery (<2%).
- Patients with low pain at three months had lower conversion to surgery probabilities compared to patients with high pain at three months (2% vs 35%).
- Patients with increasing pain over time had higher conversion to surgery probabilities compared to patient who had high pain to start with even if the endpoint was the same (35% vs 48%).
- Change in probabilities of converting to surgery was more than two times higher between six weeks and three months than between baseline and six weeks.

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