

Trapeziometacarpal Arthrodesis Compared to Trapeziectomy with LRTI and Total Joint Prosthesis Compared to Trapeziectomy in the Treatment of Trapeziometacarpal Osteoarthritis: Two Randomized Clinical Trials.

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Objectives: Based on the current literature no surgical procedure is superior over another in the treatment of TMC OA. However, given the lack of high level RCT's on TMC arthrodesis and total joint prostheses (TJP), we postulated that there could be differences between the various surgical procedures. Therefore, we conducted two high level RCT's: 1. TMC arthrodesis (plate and screws) compared with trapeziectomy with LRTI. 2. TJP compared with trapeziectomy.

Methods: Women above 40 years of age with stage II or III primary TMC OA were enrolled in our RCT's between 2008 en 2011. Both subjective (DASH and PRWHE) and objective outcomes (strength, dexterity, patient global assessment, and complications) were assessed before surgery, at 3 months and 1 year after surgery.

Preliminary Results (12 months): Arthrodesis (N=15) vs. Trapeziectomy with LRTI (N=18):

- DASH, PRWHE, strength, dexterity: All improved, but no significant differences between groups.
- Overall satisfaction: no significant difference between groups.

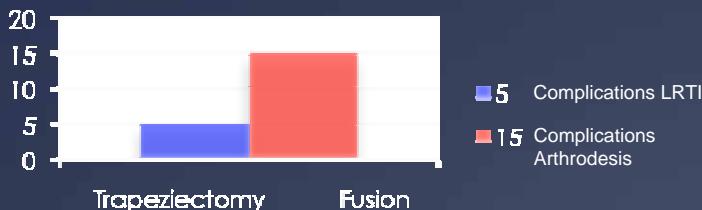
Same Operation
Trapeziectomy with LRTI



Same Operation TMC
Fusion



Significant difference between the groups ($p = 0.022$)

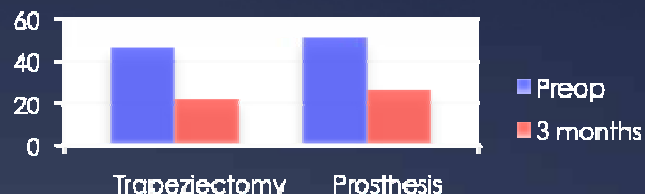


Significant difference between the groups ($p = 0.039$)

Conclusions: Based on the preliminary results we concluded that we do not recommend routinely use of TMC arthrodesis in the treatment of TMC OA.

Preliminary results (3 months): TJP (N=28) vs. Trapeziectomy (N=27):

- DASH, PRWHE, strength, dexterity: All improved, but no significant differences between groups.



DASH significantly improved in both groups $p < 0.001$



PRWHE significantly improved in both groups $p < 0.001$

- Overall satisfaction, same operation and complications: again no significant differences between groups.

Conclusions: There is no difference between TJP compared with trapeziectomy after 3 months and therefore there is no faster recovery of the TJP.