Trapeziometacarpal Total Joint Arthroplasty versus Trapeziectomy

Clinical Outcomes, Patient Experiences and Postoperative Care

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Clinical Outcomes

Randomized controlled trial

Effectiveness
- No superiority for TJA over trapeziectomy in daily hand function (PROM: MHOQ).
- Keypinch strength and satisfaction are benefits of TJA as well as shorter recovery time.

Complications
- No significant differences in revision rates.
- Postsurgical pain after trapeziectomy may take up to a year to resolve.
- 5 yrs survival: Trapeziectomy 73% / TJA 93%



Patient Experiences

Qualitative thematic analysis

Experiences
- Surgery reduces pain, yielding satisfactory results despite some residual pain, weakness, or reduced fine motor skills.
- Limitations on body functions level did not lead to significant limitations at activity and participation level.
- Differences depended on the hand function needed for activities and participants' ability to adapt their execution.

Preferences
- Trapeziectomy +/- LRTI was preferred over TJA in half of the cases.
- Reasons varied and were based on personal experience influenced by multiple factors.
- Need for comprehensive preoperative information was emphasized.



Postoperative care

Scoping review & Comparative studies

Literature
- 123 studies containing 21 prosthesis types over nearly 50 years.
- Inconclusive way of description and wide variation of postoperative regimes.
- No comparative studies for immobilization- and rehabilitation regimens after TJA.

Immobilization
- Early active mobilization is non-inferior to cast immobilization after TJA.

Rehabilitation
- Supervised rehabilitation showed no relevant benefit in functional outcomes following TJA compared to education alone in a quasi- experimental trial.



Outcome measurements
- The Michigan Hand Outcome Questionnaire (MHOQ) shows large variability in scores and distribution.
- The MHOQ cannot capture differences between the surgeries in fine motor skills, thumb strength, pain intensity, or pain-provoking activities.

Conclusions
- Both surgeries reduce pain, yielding satisfactory results despite some residual pain, weakness, or reduced fine motor skills.
- No superiority for TJA compared to trapeziectomy.
- Early active mobilization is safe after TJA.
- Education instead of rehabilitation is sufficient in 70% of the patients, hereby reducing the burden on the healthcare system and patients.
- A supplementary questionnaire is recommended with activities requiring precision skills, (key)pinch strength and pain provoking activities.
- Results provide guidance for personalized care and shared decisionmaking when considering surgery.

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