Measurement Biases

Were the evaluators blind to treatment status? *Check yes, no, or NR, and if* ***no****, explain.*

YES ☒ *Comment: The article states that the assessors were blinded to which*
NO ☐ *patients were in each group.*
NR ☐

Recall or memory bias.*Check yes, no, or NR, and if* ***yes,*** *explain.*

YES ☒ *Comment: The Boston scales and the pain scale both are self-report*
NO ☐ *measures which would require recall of symptoms/functional status.*
NR ☐

Results: List key findings based on study objectives
Include statistical significance where appropriate ($p<0.05$)
Include effect size if reported

An effect size from 0.3-0.8 is considered a "moderate" effect.
Functional status score: The between group P value was 0.04 (statistically significant in favor of the ultrasound group); the effect size for the paraffin group was 0.17 (low effect) and the effect size for the ultrasound group was 0.38 (moderate effect).
Symptom severity score: The between group P value was 0.51; the effect size for the paraffin group was 0.63 (moderate effect) and the effect size for the ultrasound group was 0.63 (moderate effect).
Pain scale: The between group P value was 0.81; the effect size for the paraffin group was 0.27 (low effect) and the effect size for the ultrasound group was 0.74 (moderate effect).
Monofilament test: The between group P value was 0.95
Palmar pinch power: The between group P value was 0.34
Distal motor latency of the median nerve: The between group P value was 0.06
Distal sensory latency of the median nerve: The between group P value was 0.83

Was this study adequately powered (large enough to show a difference)? *Check yes, no, or NR, and if* ***no****, explain.*

YES ☐ *Comment: The A priori power analysis showed that they needed at least*
NO ☒ *26 participants in each group, however they didn't due to higher than*
NR ☐ *expected drop out rates.*

Were appropriate analytic methods used? *Check yes, no, or NR, and if* ***no****, explain.*

YES ☒ *Comment:*
NO ☐
NR ☐

Were statistics appropriately reported (in written or table format) *Check yes or no, and if* ***no****, explain.*

YES ☒ *Comment: Information on effect sizes in Table 3 would have been*
NO ☐ *preferred, however everything that was recorded in written or table format was appropriately reported.*

Was the percent/number of subjects/participants who dropped out of the study reported?
YES ☒
NO ☐

Limitations:
What are the overall study limitations?

1. Due to a high dropout rate, the study may have been underpowered.
2. The participants in this study mainly experienced mild to moderate symptoms, therefore these findings may not be valid for an individual with severe symptoms.
3. Orthoses were used in both treatment groups, which may have had an impact on the overall effect of the treatment in both groups, apart from paraffin or ultrasound. A third orthosis control group may be appropriate.

Conclusion: State the authors' conclusions related to the research objectives.

The researchers found that use of a wrist orthosis in conjunction with ultrasound therapy may be more effective than wrist orthosis and paraffin wax therapy when treating CTS patients. However, the only statistically significant difference found between the groups was in functional status scores.

27

Title: Functional Outcome Using Early Controlled Active Motion in Rehabilitation of a Replanted Hand: A Case Report

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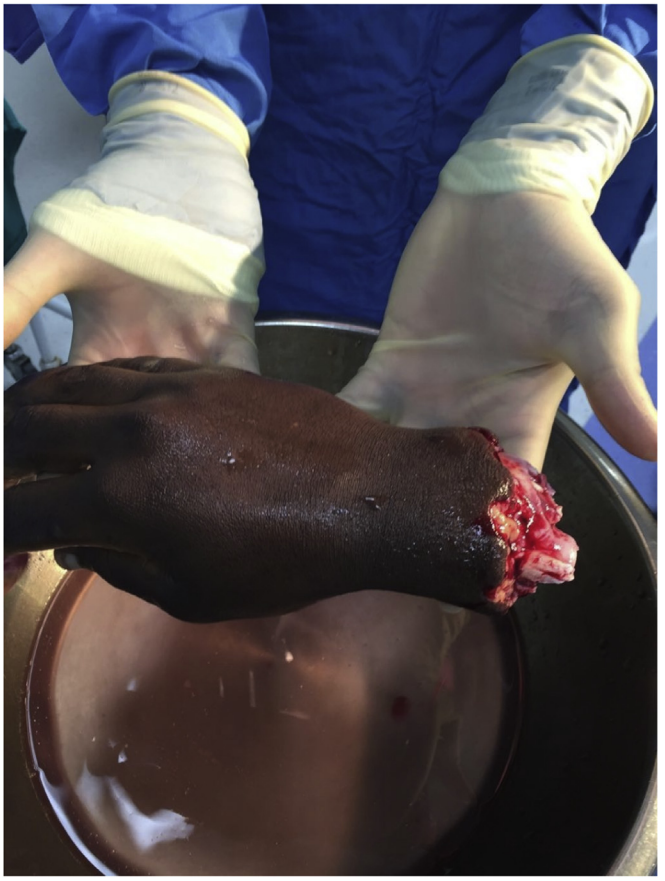
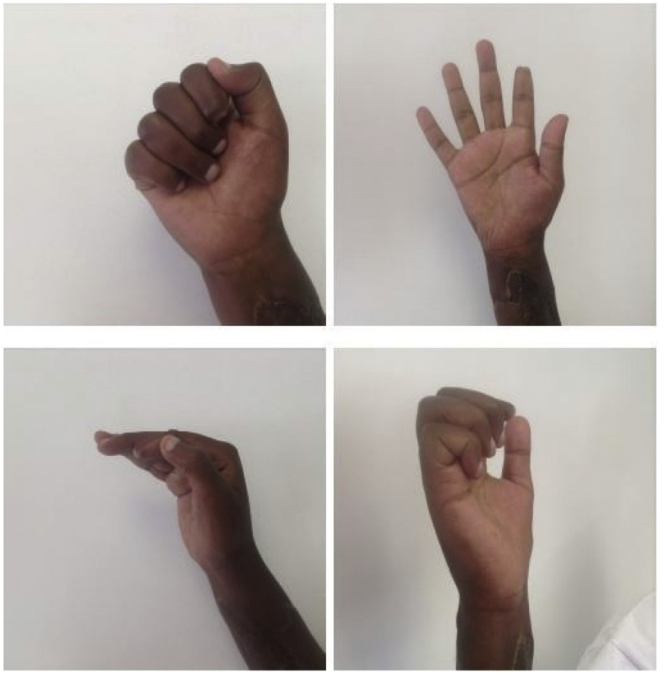
[3] *Discipline of Occupational Therapy, University of KwaZulu-Natal, Durban, Kwazulu Natal, South Africa*

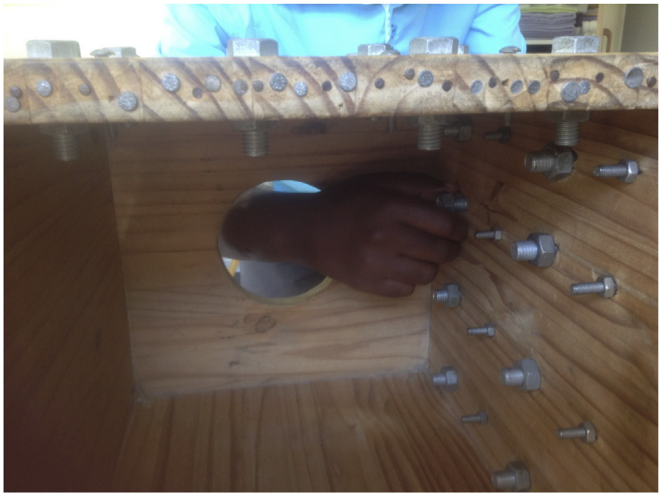
Purpose: To illustrate the use of early active motion after hand replantation, and to recommend further research in this area. While bone shortening is an integral part of replantation surgery, it has not influenced replantation rehabilitation protocols, with many still delaying active motion until 3 or 4 weeks after surgery.
Methods: This is a retrospective case study which details the rehabilitation and excellent functional outcome of a young man who sustained a complete avulsion amputation of his dominant upper limb at the level of the distal forearm. His hand was replanted with 2cm bone shortening and he was referred to Occupational Therapy for early controlled active motion on day six. The patient had 65 sessions of Occupational Therapy in the first year which included but was not limited to, early A/PROM, many custom-molded orthoses, occupation-based intervention and sensory re-education. No additional reconstructive procedures were performed.
Results: One year after surgery, the patient had excellent range of motion, with almost full flexion and extension of the digits, ability to oppose thumb to all fingers, good intrinsic return, 32% power grip strength, protective sensation, and mildly impaired coordination (30 seconds on 9 Hole Peg Test). Subjectively, the patient was highly satisfied and was managing well at work.
Conclusion: This case achieved a favorable functional outcome following a complete hand replantation. The following therapeutic interventions were considered important contributors: early controlled active motion, the inclusion of occupation-based intervention, and many custom-molded orthoses. The initiation of early active motion appears uncommon after hand replantation. Despite bone shortening being an integral part of replantation surgery, this has not influenced rehabilitation protocols. Research is required to determine if bone shortening reduces tendon repair tension, allowing for early active ROM and thereby contributing to favorable results. Further research with a significant number of patients or a randomized controlled trial is essential to investigate the value of forearm shortening with early controlled active motion in distal forearm replantation.



Complete avulsion amputation at distal forearm level.



Almost full AROM of digits 12 months after replantation.



Using hand in a fine motor task with vision occluded.

28

Factors Impacting American Society of Hand Therapy Membership: Survey Research

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Purpose: The purpose of this research is to present the rationale and perceived benefits of actively engaging as an American Society of Hand Therapy member and to understand the rationale behind the decision of certified hand therapists when electing to become a member or not.

Methods: The data was collected from a sixteen question survey that was created by two professionals who are familiar with survey design. The pilot survey was electronically mailed to research survey experts for additional review. The sixteen questions were to be answered by multiple choice, open-ended format, or by Likert scale. The first survey was sent out on January 29, 2018 and the survey was sent out again two weeks later on February 12, 2018. Participation in the survey was completely voluntary and the option to not respond to individual questions was provided. Data was collected from Survey Monkey at the close of the response window and was themed by Occupational Therapy Doctorate students.

Results: 1,271 people responded to the survey, 489 (39%) identified as being non-active members of the American Society of Hand Therapy. Out of these respondents, 1,098 were occupational therapists. There were 341 respondents (27%) that stated they were members of the American Occupational Therapy Association and 926 (73%) stated that they were not a member. Out of these respondents, 158 were physical therapists. There were 53 respondents (34%) that stated they were members of the American Physical Therapy Association and 105 (66%) stated they were not a member. Four respondents chose to skip this question.

Practitioners that chose to be members rated the top three benefits as: subscription to scholarly journals, member only pricing on educational products, and updated resources on legislative and reimbursement issues related to practice. The rationale provided by respondents for not joining the American