ORTHOSIS TREATMENT IN DUPUYTREN’S DISEASE
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AIM: Establish the diversity of orthosis treatment in literature relating to Dupuytren’s disease. Recommendations based on the findings are made for future research and practice.

INTRODUCTION: Application of orthoses are an essential part of treating patients with Dupuytren’s disease, especially after surgery, collagenase injection treatment or as a conservative option. The goals of treatment are the retrieval of normal range of motion, an adequate hand function, prevention of scar contracture or slow down recurrence\(^1\). Research on the effectiveness of orthosis and their use is poor. This review provides a synthesis evaluating the scope of research on use and implementation of orthosis treatment in clinical practice.

RESULTS: Different types of orthosis (Figure 1) with different utilization were applied in the 32 analyzed studies (two RCTs, two CCTs, one Delphi study, two systematic review, four review reports, 13 ODs, eight expert opinions)\(^{1-12}\). The sample size of the studies had a range from four\(^{13}\) to 268\(^{14}\) patients. The Level of Evidence (Oxford) of included articles ranged from Ib\(^{13,14,12}\) to V\(^{6,7,12,13,19-21,26-30}\). The ratings of the SEQES-Score ranged from six\(^{22}\) to 13\(^{29}\) to 43\(^{31}\). The authors gave information about wearing of orthosis in a range of weeks to twelve months\(^2\) during day- and / or nighttime.

- **Effect of Orthosis treatment in Dupuytren’s disease:**
  - There are no statistical significant differences in - active range of motion\(^{5,9,12,14,31}\) - pain score\(^1,24\) - improvement outcomes\(^1\) - Disability of the Arm, Shoulder and Hand Questionnaire (DASH)-Score\(^3,12\) - number of hand therapy sessions\(^13\)
  - **No effect of preventing scar contractures\(^9\)**
  - **Orthosis treatment indicates no influence on rate of recurrence\(^25\)**

CONCLUSION: There are many factors which influence the outcome of orthosis treatment in Dupuytren’s disease:

- The effectiveness of the orthosis treatment is rarely investigated or studied in combination with different surgical interventions or methods of hand therapy\(^{1,12}\) and therefore it is difficult to determine the effectiveness of orthosis treatment.
- Due to small sample size of the studies it is not possible to conclude scientific evidence.
- Reports show different approaches after surgical interventions including various types and durations of wearing orthosis. There is no evidence which type of orthosis may be the best\(^23\).
- The use of an orthosis pursues different aims in different stages of rehabilitation. In the first week post-surgery the goal of an orthosis is to support wound healing\(^12,26,29\). Dynamic (finger) orthosis are used to increase the range of motion\(^5,9,16,28\). In later stages of Dupuytren’s disease it is used to prevent side effects of such as PIP joint flexion contractures\(^1,4,6,10,12,13,16,20,22,25,30\),
- Fact is, during the first month after surgery scars can affect outcomes and therefore early orthosis follow-up does not expressive, because improvement in range of motion or strength is still possible. The short follow-up period is insufficient to make general statement to long term intervention-effects\(^17\).
- The patient adherence is an important factor of the effect of orthosis treatment and probably influence the outcome\(^27,33\).
- The nonexistant heterogeneity of disease history and the severity of the preoperative contracture are also reasons for varied conclusions\(^29,31\).

REFERENCES: