

# **INTERMITTENT PNEUMATIC COMPRESSION FOLLOWING VOLAR PLATE FIXATION – AN RCT INCLUDING 115 ADULTS WITH DISTAL RADIUS FRACTURES**

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## **Introduction**

This study investigated the difference between standard postoperative rehabilitation compared to adjunctive intermittent pneumatic compression (IPC) therapy following distal radius fracture treated with volar plate surgery.

## **Patients and methods**

115 patients were randomized to a control or an experimental group. After 4 weeks of immobilisation, the experimental group got IPC-therapy in addition to standard postoperative rehabilitation. Primary outcome was assessed using COPM (Canadian occupational performance measure) 6, 11 and 52 weeks after surgery. Secondary measurement of pain (Visual Analogue Scale; VAS), swelling (volumetry) and flexibility (goniometry) were measured 4, 6, 11 and 52 weeks and grip strength 11 and 52 weeks following surgery. Functional measurements were performed on the injured hand at all-time points and on the healthy hand at the first session.

## **Results**

No significant differences between groups were found regarding COPM, swelling, strength, flexibility or pain. The experimental group tended to decrease more in perceived pain during activity between week 6 and 11 and during rest between week 4 and 6.

## **Discussion**

Except minor non-significant initial effects on pain, no benefits from IPC-treatment were found in this study. It might be that the standard training both groups performed was so effective that no further intervention was needed. Also, it could be that IPC is more effective earlier during rehabilitation when swelling probably is more prominent, as some previous studies on smaller and various populations have reported.

## **Conclusion**

The results do not support general use of IPC initiated 4 weeks after radius fracture volar plating surgery.