

The effect of two different orthoses on pain, hand function, patient satisfaction and preference in patients with thumb carpometacarpal osteoarthritis

Authors: Dr. A.E. van der Vegt, R. Grond, C. Emmelot
Research centre: Groningen University Medical Centre
Published in: The Bone and Joint Journal
Publication date: 2 February 2017

1. Introduction

The standard treatment approach is immobilization of the thumb CMC joint, which is assumed to be best achieved by including both the CMC and the MP joints of the thumb. Many remain skeptical that such a small orthosis as the Push[®] CMC can be effective. The authors hypothesize that the custom orthosis actually reduces pain more than the Push[®] CMC and thus the patient prefers it.

2. Why was this research carried out?

The researchers (rehabilitation doctors) wanted to determine if there were differences and if so what these differences were between two different orthoses, when treating patients with primary CMC I arthritis. The researchers compared the Push Ortho CMC Thumb brace (PB) with a made-to-measure orthosis (Custom Made = CM). The CM orthosis immobilises both the CMC I joint and the MCP I joint.



Push CMC



Custom made (Orfit)

3. What was the purpose of the research?

The researchers wanted to collect results about:

- The degree of pain;
- Hand function;
- Patient satisfaction;
- Patient preference.

4. Who took part and how was the research carried out?

Sixty three patients participated in the study, of which forty four were female. The average age of the patients was 61. Eventually, 59 patients were analysed.

Method: The patients either used the CM brace or the PB first, which was then followed by a so-called wash-out period of two weeks. After this, the other orthosis was used for two weeks and the analysis was then carried out.

- Degree of pain: 10 cm VAS scale



- Hand function: Jebsen Taylor hand test Function, Nine Hole test Peg, key grip, pinch grip
- Patient satisfaction and preference: Quebec User Evaluation of Satisfaction

5. What were the most important results?

Both of the orthoses provided moderate reduction in pain without any significant difference between the two. The Push CMC brace provided less restriction of the key grip and therefore offered better hand function compared with the CM brace.

The Push CMC brace achieved a higher satisfaction score with patients. The majority of patients preferred the Push CMC brace for use in the future.

6. What does this mean in practice?

Prescribing the Push CMC brace is a good choice, compared to custom made orthoses in patients with CMCOA. Patients prefer the Push CMC in comparison with custom made orthoses.

Why?

- Push CMC delivers equal pain relief
- Push CMC allows greater hand function
- Push CMC provides superior patient satisfaction
- Patients chose to wear it longer

