The effects of a brace for patellofemoral osteoarthritis targeting knee pain and bone marrow lesions were overestimated or not?

We read with deep interest the article by Callaghan et al related to the efficacy of patellar brace in patients with patellofemoral (PF) osteoarthritis (OA) targeting knee pain and bone marrow lesions (BMLs). To our best knowledge, patellar brace in the management of PF disorders, including PF arthritis, was first introduced in 1981. Since then only a few studies have examined the effects of patellar brace on the treatment of PF OA. This high-quality randomised controlled trial suggested that a PF brace reduced BML volume in the targeted compartment of the knee and relieved knee pain. These results were ‘promising’ in a situation where only a few conservative treatments have been consistently shown to affect structural findings. We really appreciate the work done by the authors. However, after reading the article, there are worthwhile issues that need to be explored.

A recent meta-analysis showed that there was a moderate statistically significant difference favouring the valgus brace group for improvement in pain and function compared with a control group that did not use an orthosis (blank control). However, compared with a control group that used a control orthosis (placebo), only a small improvement in pain, but not function, was observed. Although the authors fully explained the reasons why they did not choose a placebo as the control group, the possibility of overestimation of the effects cannot be ruled out. This should also be considered as a limitation in the present study. In addition, the authors did not mention the activity level of the included patients during the subsequent six weeks. Is there a possibility that patients with PF OA with patellar brace were more inclined to move less (such as knee-flexing exercises and weight-bearing activities)? Especially some knee-flexing activities, including stair climbing, arising from a chair and activities involving kneeling or squatting, can be hindered to some extent by the patellar brace. Thus, both knee pain and BMLs could be relieved temporarily. No doubt, we are very much looking forward to their response to these issues.

We respect the great contributions of the authors and are looking forward to their response to these issues.

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Competing interests None.

Provenance and peer review Not commissioned; internally peer reviewed.

To cite Zeng C, Gao S-guang, Lei G-hua. Ann Rheum Dis Published Online First: [please include Day Month Year] doi:10.1136/annrheumdis-2015-207673

Received 27 March 2015
Accepted 28 March 2015


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Chao Zeng, Shu-guang Gao and Guang-hua Lei

*Ann Rheum Dis* published online April 9, 2015

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