

The Efficacy of Valgus Bracing for Pain Relief and Functional Improvement in Knee Osteoarthritis: Evidence from Clinical Studies

Several studies investigating the clinical efficacy of valgus bracing have reported that patients experience significant pain and improvement in physical function. Significant reduction of pain during activities of daily living has been reported at 4 weeks, 6 weeks, 9 weeks, and 12 months. (RF5)

Given the encouraging evidence that off-loader braces are effective in mediating pain relief in conjunction with knee OA and malalignment, bracing should be fully used before joint realignment or replacement surgery is considered. (RF1)

VAS results showed that, compared with control patients, brace patients had significantly less pain throughout the day and better activity levels (Figures 5,6). The groups did not differ in ability to sleep or NSAID use but each parameter showed a trend to be better in the brace group. There was no effect of time in either VAS. (RF2)

Studies of the clinical efficacy of valgus bracing have shown significant pain relief and improvement in function using a number of validated test methods (RF5)

Adjustable valgus bracing was effective in reducing medial compartment load and subsequent pain while also improving knee function in a group of patients with osteoarthritis. (RF5)

In this study, we have documented those loads and determined with use of an analytical model and measured kinematics and kinetics, the change in medial compartment load that occurs with bracing. The data support the theory that valgus bracing can significantly reduce medial compartment loads, which is consistent with patient reports regarding pain relief and improved function with the use of valgus bracing. (RF5)

Therefore, valgus bracing with adjustable alignment remains an effective therapeutic treatment modality for reducing pain and increasing function in patients with medial tibiofemoral osteoarthritis of the knee. (RF5)

When a realigning force is applied to the knee using a valgus unloader brace (Fig. 3), the expectation is that small improvements in TF alignment and stability will result in meaningful reductions in the magnitude of the Madd and in meaningful improvements in the distribution of compressive load over TF joint surfaces. (RF3)

For persons with unicompartmental knee osteoarthritis (OA), off-unloader braces are mechanical interventions designed to reduce pain, improve physical function, and possibly slow disease progression. Pain relief is thought to be mediated by distracting the involved compartment via external varus or valgus forces applied to the knee. In so doing, tibiofemoral

alignment is improved, and load is shifted off the degenerative compartment, where exposure to potentially damaging and provocative mechanical stresses is reduced.(RF4)

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