

athletic tape, being more porous and water-resistant. Patients can wear it for several days after application²⁵. Although the tapes were changed every three days in this study, with a one-day hygiene break, 16% of participants experienced allergic reactions.

Mereday et al. found that the UCBL orthosis helps restore proper calcaneus positioning in flexible flatfoot deformity²². The UCBL orthotic device effectively brought some arch and hindfoot parameters closer to their non-pathologic values, partially restoring midfoot bone alignment by supporting the midfoot bones' contours. Kogler et al. suggested that effective longitudinal arch support requires the orthosis's medial surface to support the arch's apical bones²⁶. The UCBL also assisted calcaneus inversion with respect to the tibia, aiding hindfoot restoration to a more erect, healthy alignment. Correct calcaneus positioning is deemed crucial in treating flatfoot. The UCBL also dorsiflexed the talus at the ankle joint, moving it to a more normal position, though not entirely reversing the flatfoot configuration. Proper talus alignment in plantar/dorsiflexion is vital for even weight distribution, as improper alignment leads to undue stress on medial calcaneal ligaments and tarsal articulations²².

KT's impact on function, pain, and range of motion is subject to debate. The present study sheds light on the effect of additional KT treatment in SFPP compared to the UCBL-only group. Several hypotheses emerge to explain KT's effectiveness, with tension generated by KT being a key distinction between the groups.

It's plausible that KT-induced tension increased neural feedback during walking and standing, bolstering balance. Tactile input can reshape motor control by altering the central nervous system's excitability²⁷. Applying tape with tension along muscle fibers might boost underlying muscle strength. However, some studies suggest that taping's influence on

muscle activity, as measured by electromyography or isokinetic dynamometer, is negligible. Tactile input could stimulate cutaneous mechanoreceptors enough to enhance muscle excitability, though KT might not provide sufficient muscle power enhancement²⁸.

Greater muscle excitability in the anterior tibia could counter excessive pronation and navicular inclination, thereby stabilizing the ankle in the posteromedial and medial direction²⁹.

Orthoses use for SFPP may lead to various complications. Orthoses typically need to be rigid or semi-rigid for proper tarsal bone alignment, but this can increase pressure on the tarsal bulge, decreasing treatment adherence. Stretched KT aids calcaneal valgus improvement, heightens the arch, and reduces talar head subluxation.

CONCLUSION

To summarize, our study's findings indicate statistically significant impacts of KT on postural control, albeit with limited outcomes. The results highlight that Group 1 exhibited significant symptom improvement in pes planus. The application of KT has enhanced orthosis effectiveness, resulting in improved AOFAS scores and mitigated complications associated with the use of orthosis alone. The necessity for more extensive investigations involving larger patient groups cannot be overlooked. Further research holds the potential to enhance empirical understanding of KT's utility and its potential to prevent deformities and functional limitations linked to SFPP

Acknowledgment: My profound gratitude and appreciation goes to all participants and XXXClinical Research who demonstrated their involvement and commitment during the study.

Ethics Committee Approval:

Conflict of Interest: The authors declared no conflicts of interest.

Financial Disclosure: The authors declared that this study has received no financial support.

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