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**Role of weight bearing in acute achilles tendon rupture. A network meta-analysis of the management options****Shayan Ali Irfan***Dow University of Health Sciences, Pakistan*

**Objective:** The objective of the study is to assess the effectiveness of early and late weight-bearing in the conservative and surgical management of Acute Achilles Tendon Rupture.

**Methods:** The research was conducted according to the PRISMA guidelines for Meta-analysis and Systematic Review. The quantitative analysis was conducted to compare the clinical effectiveness of early and late weight bearing in Conservative management, Open Repair, Minimally Invasive surgery, and percutaneous surgery for the management of Acute Achilles Tendon Rupture. The Review manager software and MetaInsight Software was used to conduct Meta-analysis and Network Meta-analysis, respectively.

**Results:** The results of literature search revealed an inclusion of 27 double-arm studies randomized controlled trials to provide direct and indirect comparison between eight studies. The clinical outcomes were assessed employing the ATRS score, return to work, heel-raise, rerupture, and total complications. The statistical analysis revealed nonsignificant difference between ATRS score [ $p=0.89$ , MD;  $-0.15$  ( $-2.15, 1.86$ )]. The rank analysis revealed no significant difference between the ranks of the included interventions and early and late weight-bearing.

**Conclusion:** The quantitative analysis showed no significance of weight bearing in in terms of clinical outcomes including ATRS score, return to work, heel-raise, rerupture, and total complications.

**Biography**

Shayan Ali Irfan, a recent alumnus of Dow University of Health Sciences, stands as a burgeoning professional within the esteemed realm of orthopedics. Presently, he lends his expertise as an intern in the Orthopedic Department of a distinguished public-sector hospital in Pakistan, showcasing an unwavering commitment to the intricacies of musculoskeletal care. Mr. Irfan, a zealous research enthusiast, possesses a formidable acumen in statistical analysis and research writing, evident in his impressive portfolio of several published articles. Undoubtedly, he is not merely satisfied with this laurel but is ardently engrossed in the meticulous number of additional studies currently under rigorous review. With an ambitious trajectory, Shayan Ali Irfan aspires to carve out a distinguished career path in the field of orthopedics, a testament to his passion for advancing the frontiers of medical knowledge and patient care.