

The Effectiveness of Kinesio Taping in Enhancing Early Post-Operative Outcomes Inpatients after Total Knee Replacement or Anterior Cruciate Ligament Reconstruction

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Abstract : Background: The number of Total Knee Replacement (TKR) and Anterior Cruciate Ligament Reconstruction (ACLR) performed every year is increasing. The main aim of physiotherapy early recovery rehabilitation after these surgeries is to control pain and edema and regain Range of Motion (ROM) and physical activity. All of these outcomes need to be managed by safe and effective modalities. Kinesiotaping (KT) is an elastic non-invasive therapeutic tape that has become recognised in different physiotherapy situation as injury prevention, rehabilitation, and performance enhancement and been used with different conditions. However, there is still clinical doubt regarding the effectiveness of KT due to inconclusive supporting evidence. The aim of this systematic review is to collate all the available evidence on the effectiveness of KT in the early rehabilitation of ACLR and TKR patients and analyse whether the use of KT combined with standard rehabilitation would facilitate recovery of postoperative outcome than standard rehabilitation alone. Methodology: A systematic review was conducted. Medline, EMBASE, Scopus, AMED PEDro, CINAHL, and Web of Science databases were searched. Each study was assessed for inclusion and methodological quality appraisal was undertaken by two reviewers using the JBI critical appraisal tools. The studies were then synthesised qualitatively due to heterogeneity between studies. Results: Five moderate to low quality RCTs were located. All five studies demonstrated statistically significant improvements in pain, swelling, ROM, and functional outcomes ($p < 0.05$). Between group comparison, KT combined with standardised rehabilitation were shown to be significantly more effective than standardised rehabilitation alone for pain and swelling ($p < 0.05$). However, there were inconstant findings for ROM, and no statistically significant differences reported between groups for functional outcomes ($p > 0.05$). Conclusion: Research in the area is generally low quality; however, there is consistent evidence to support the use of KT combined with standardised post-operative rehabilitation for reducing pain and swelling. There is also some evidence that KT may be effective in combination with standardised rehabilitation to regain knee extension ROM faster than standardised rehabilitation alone, but further primary research is required to confirm this.

Keywords : anterior cruciate ligament reconstruction, ACLR, kinesio taping, KT, postoperative, total knee replacement, TKR

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