Discontinuing Elastic Compression Use Post Total Knee Arthroplasty Is Beneficial

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INTRODUCTION:
During the early post-operative time period after a total knee arthroplasty (TKA), the main barriers to patients' functional mobility include pain, muscle strength deficits, and postoperative swelling. To address swelling in this population, patients are historically placed in elastic compression immediately after surgery. The purpose of this study is to evaluate the use of elastic compression (Ace Bandages®) on post-operative pain and physical therapy parameters in TKA patients.
METHODS:
Elective, unilateral, TKA patients from a single surgeon at an orthopedic specialty hospital were reviewed retrospectively. Surgeries took place between September 4, 2024 and February 28, 2025. The use of elastic compression was discontinued on December 1, 2024. There were 67 patients treated with elastic compression and 75 patients for whom compression was not utilized. Patient pain was assessed every 4 hours. Inpatient physical therapy parameters, opiate usage, and early complications were also assessed.
RESULTS:
Patients in the elastic compression group experienced significantly more pain, both at rest (4.26 v 3.72, p=0.035) and while active (5.17 v 4.58, p=0.027) in the 4-12 hour timeframe post TKA. Additionally, over the course of their hospital stay, patients in the elastic compression group walked a significantly shorter distance by over 30 feet than those in the no compression group (131.7 v 165.2 p=0.011). Opiate consumption was similar between groups. The 30 second sit to stand trended toward being significantly different (p=0.079) favoring the no compression group, while other therapy assessments showed no difference. Early post-operative complications were the same between groups.
DISCUSSION AND CONCLUSION:
The use of elastic compression (Ace Bandages®) post TKA does not appear to offer benefits to patients, and was associated with increased short term post-operative pain and reduced physical therapy outcomes. The early use of elastic compression in TKA patients should be eliminated whenever possible to provide a better patient experience.