

A randomised trial to evaluate compliance in terms of patient comfort and satisfaction of two pneumatic compression devices

Pagella P, Cipolle M, Sacco e et al (2007). *Orthopedic Nursing*; 26(3): 169-174

Overview

A randomised controlled trial was undertaken to compare patient comfort and satisfaction between two different calf length intermittent pneumatic compression (IPC) devices in an orthopaedic setting. Care staff also completed an evaluation of their perceptions of the devices. Results demonstrated that the breathable garment (product Y) was more comfortable and rated more highly compared to a plastic garment that was hot and made patients' sweaty.

Design and methodology

Two equally effective IPC devices were evaluated using a randomised design. Product X was used in the hospital at the time of the evaluation and consisted of thick plastic sleeves that anecdotally patients removed due to them being hot and uncomfortable. Product Y, introduced into this study, utilised breathable calf sleeves allowing moisture to escape and air to circulate. Both products were deemed to be effective in terms of deep vein thrombosis (DVT) prophylaxis.

Measurements recorded

After meeting inclusion criteria and giving informed consent, patients were randomly assigned to receive either product. On day 3 or discharge each patient was asked to complete an evaluation form reporting ratings of comfort and satisfaction. Nursing and care staff also rated the products.

Results

Sixty-five patients completed the evaluations, 36 patients to product X and 29 patients to product Y. Group demographics were comparable. The product X group reported less desirable scores than the product Y group for all questions. This outcome was the same for nurse evaluations of the products. Product Y was associated with a greater amount of wear time than product X.

Conclusion

Patient satisfaction and comfort are important factors that may influence both compliance with, and effectiveness of IPC devices for DVT prophylaxis. Patients and staff were more satisfied with product Y than product X. Staff also reported greater ease of application with product Y than product X. At the conclusion of the evaluation, the hospital discontinued use of product X and utilised product Y hospital wide. There was also a downward trend of DVT and pulmonary embolism (PE) diagnosis after the implementation of product Y despite a rise in the number of hospital admissions.