

A Novel Compression Therapy for Managing Postoperative Orthostatic Hypotension

Hanan Mohammed Mohammed, Ph.D*,**

ABSTRACT

Post-operative hypotension is most often due to hypovolemia, secondary to surgical blood loss, or vasodilatation due to anesthetic agents. The nurse should take into consideration the nursing measures to minimize it. This study aimed to evaluate the preventive efficacy of a novel lower limb compression bandaging technique in reducing postural hypotension and its associated symptoms among postoperative major surgery patients during positional changes from lying to sitting position. A controlled clinical trial research design on 60 patients undergoing major surgery were recruited and randomly divided into two equal groups: a study group who had a bandage applied in their lower limbs, and a control group with no bandage. A patient assessment sheet was designed by the researcher to record patient data. It consisted of parts for demographic data, medical history, and physical assessment. At the fifth minute, the mean systolic and diastolic blood pressure were statistically significantly higher in the study group compared to the control group. Also, heart rate, and the severity of palpitations and dizziness, were statistically significantly lower in the study group, at the first, third, and fifth minutes of the sitting position, $p < 0.001$. Postural hypotension was less in the study group at the fifth minute. Postural hypotension and its consequences may be largely prevented by prior leg bandaging. The use of elastic bandages is advisable when seating patients post-operatively, especially with major surgery and long bed recumbence. Longer follow-up studies are suggested to assess the long-term effect on postural hypotension, and the possible side-effects of the interventions.

Keywords: Bandaging; Compression; Lower Limb; Postural Hypotension

Bahrain Med Bull 2026; 48 (1): 2889-2893

* Department of Medical-Surgical Nursing, Faculty of Nursing
Al-Baha University, Saudi Arabia.

** Department of Medical-Surgical Nursing, Faculty of Nursing
Ain Shams University, Egypt.
E-mail: Hanan.tab2023@yahoo.com