

Finding Evidence Related to Application of Graduated Compression Stockings (GCS) for Post-Operative Total Joint Replacement (TJR) Patients

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Problem:

Skin Issues related to pressure and assessment deficiencies. The Network utilizes thigh high GCS for mechanical prophylaxis for deep vein thrombosis. Physicians order GCS for their orthopaedic TJR patients often with pharmaceutical anticoagulants. Numerous skin impairments that lead to binding indentation marks & reddened heels surfaced. Some cases have resulted in serious skin necrosis & decubitus which overall compromised healing, length of stay & morbidity.

Evidence: Literature review from 1975 to 2004 including orthopaedic, surgical, chest journals has been cited. Nursing practice standards recommend assessment & the removal of GCS per shift. Morning care which includes the bathing & moisturizing of the legs daily is sometimes neglected. Reasons given that staff neglects these practices are time & axillary staff constraints or even patients refusing, due to orthopaedic postoperative pain to have the GCS pulled off then replaced may be compromising skin integrity.

Strategy: Pressure ranges of GCS are 14 mmHg at the ankle & graduate to 08 mmHg at thigh level. Knee highs are as effective without the discomfort, issues of rolling down, or circulation constriction at the popliteal fossa. Pharmaceutical agents have shown to be most effective in decreasing the incidence of DVT. GCS alone in moderate to high risk patients do not.

Practice change: Anticoagulant pharmaceutical prophylaxis & early ambulation are most effective measures to be utilized to decrease risk in moderate to high risk TJR patients. Mechanical prophylaxis is unnecessary. GCS are used per physician preference or as traditional practice. Knee highs provide more comfort & are lower in costs.

Evaluation: This is a work in progress

1. Establish product (knee highs) accessibility & supply
2. Identified costs variation
3. Inform physicians & staff
4. Stress early ambulation
5. Maintain surveillance of skin issues & document/record incidents

Recommendations:

- a. Evaluate the effectiveness of the knee high GCS.
- b. Solicit a satisfaction survey post-intervention 3 months to nurses & physicians to change in hose length.
- c. Evaluate positive & negative factors to change process.

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