

A comparison of intermittent pneumatic calf compression and enoxaparin for thromboprophylaxis in total hip replacement

Stone et al (1996). *International Orthopaedics*; 20: 367-369

Overview

Replacement hip surgery carries a high risk of venous thromboembolism (VTE) development. This study compared the use of Enoxaparin (low molecular weight heparin – LMWH) with the **FLOWTRON® DVT Prophylaxis System** using calf compression. The study demonstrated that the use of the *FLOWTRON* System is a safe and effective method of DVT prophylaxis in hip replacement surgery.

Design and methodology

- A prospective randomised controlled trial (RCT).
- 50 consecutive patients admitted for elective hip replacement surgery:
 - 25 received *FLOWTRON* System calf compression
 - 25 received Enoxaparin
 - Groups were similar in terms of patient, age and weight

Measurements recorded

- Peri-operative blood loss, subjective assessment of operative-field oozing.
- Post-operative:
 - Haemoglobin on days 2 and 5 postoperatively
 - Blood loss into the drains post operatively
 - Amount of blood transfused
- Colour duplex ultrasound scans were performed 1 and 6 weeks post-operatively assess for development of DVT.

Results

- 1 patient from each group developed a DVT. Both patients were asymptomatic and were detected during the 6 week ultrasound scan.
- The operative field was judged by the surgeons to be drier in the *FLOWTRON* System group in comparison to the Enoxaparin group.
- No significant wound drainage or haemoglobin differences.
- 3 patients in the *FLOWTRON* System group required blood transfusions compared to 7 in the Enoxaparin group.

Conclusion

“The use of intermittent calf compression garments is a safe method of prophylaxis for general use in a unit performing total hip replacement.”