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


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.”