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## Diathermy versus scalpel for skin incision in patients undergoing open inguinal hernia repair: A systematic review and meta-analysis

**Nisha Mallya, Ketevan Papidze, Shahab Hajibandeh**  
Ysbyty Gwynedd Hospital, Bangor, United Kingdom

**Aims:** To compare outcomes of diathermy and scalpel for skin incision in patients undergoing open inguinal hernia repair.

**Methods:** We performed a systematic review in accordance with PRISMA statement standards. We conducted a search of electronic information sources to identify all studies comparing use of diathermy and scalpel for skin incision in patients undergoing inguinal hernia repair. Fixed-effect model was applied to calculate pooled outcome data.

**Results:** We identified 9 studies, 4 randomised controlled trials and 5 prospective cohort studies, enrolling a total of 830 patients. Meta-analysis of RCTs showed no difference between the diathermy and scalpel groups in terms of surgical site infection (OR:0.77,P=0.53), seroma (OR:0.86,P=0.78), VAS pain score at 6 hours (MD:-0.10,P=0.34), 12 hours (MD:-0.10,P=0.40), and 24 hours (MD:0.03,P=0.79). Use of diathermy for skin incision was associated with shorter incision time (MD:-36.00,P<0.00001) and lower risk of haematoma (OR:0.14,P=0.01). Meta-analysis of observational studies showed no difference between the diathermy and scalpel groups in terms of surgical site infection (OR: 0.87, P=0.55), haematoma (OR 0.14,P=0.08), seroma (OR:0.86,P=0.78), VAS pain score at 6 hours (MD:-0.10,P=0.56), 12 hours (MD:-0.10,P=0.58), and 24 hours (MD:0.10,P=0.59). Use of diathermy for skin incision was associated with shorter incision time (MD:-39.40,P<0.00001).

**Conclusions:** There is no difference between use of diathermy and scalpel for skin incision in patients undergoing open inguinal hernia repair in terms of surgical site infection, seroma and postoperative pain. Use of diathermy for skin incision may be associated with shorter incision time and may reduce the risk of haematoma formation.

### Biography

Nisha Mallya studied her M.B.B.S in Kasturba Medical College, India. She is currently training to be a surgeon. She has worked in Orthopaedics, the Accident and Emergency Department, General Surgery and Intensive Care Unit.

nishamallya@hotmail.co.uk