

Closed suction surgical wound drainage after orthopaedic surgery

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Abstract

Background

Closed suction drainage systems are frequently used to drain fluids, particularly blood, from surgical wounds. The aim of these systems is to reduce the occurrence of wound haematomas and infection.

Objective

To evaluate the effectiveness of closed suction drainage systems for orthopaedic surgery.

Criteria for considering studies for this review

We searched the Cochrane Bone, Joint and Muscle Trauma Group Specialised Register (March 2006), and contacted the Cochrane Wounds Group. We also searched the Cochrane Central Register of Controlled Trials (The Cochrane Library 2006, Issue 1), and MEDLINE (1966 to March 2006). Articles of all languages were considered.

Selection criteria

All randomised or quasi-randomised trials comparing the use of closed suction drainage systems with no drainage systems for all types of elective and emergency orthopaedic surgery.

Data collection and analysis

Two authors independently assessed trial quality, using a nine item scale, and extracted data. Where appropriate, results of comparable studies were pooled.

Main results

Thirty-six studies involving 5464 participants with 5697 surgical wounds were identified. The types of surgery involved were hip and knee replacement, shoulder

surgery, hip fracture surgery, spinal surgery, cruciate ligament reconstruction, open meniscectomy and fracture fixation surgery.

Authors' conclusions

There is insufficient evidence from randomised trials to support the routine use of closed suction drainage in orthopaedic surgery. Further randomised trials with larger patient numbers are required for different operations before definite conclusions can be made for all types of orthopaedic operations.