Method: Similar weights of beef (similar structure to our skeletal muscle) with a rough surface area of 130 cm^2 were used. Into these a series of standardised cuts were made: two stellate (2 cm × 2 cm) and three linear (5 cm) incisions all to a depth of 1 cm. Following this 15.00 g of fine sand particles were poured and gently rubbed into the meat to replicate a dirty wound. Each wound was irrigated with 1000 ml of saline using standardized techniques. The irrigant was collected and the residual particulate debris was extracted through evaporation and weighed. Each experiment was duplicated three-fold and a mean weight obtained.

Results: Using the percentage of silicate retrieved as a comparison the new system is more efficient to HPPL. Both high pressure systems were superior to simple low-pressure irrigation methods of syringe and giving set in removal of particulate matter.

Conclusion: The new system is to be recommended for irrigation and debridement of open wounds with heavy particulate matter contamination. This however does not take into account the greater cost implication of the new equipment compared with the other methods commonly used today.

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Syndysmotic screw removal in Weber 'C' ankle fractures

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Objective: To assess functional outcome and complications in patients with Weber C fracture following syndysmotic screw removed.

Patients and methods: Forty-three consecutive patients with closed Weber C type ankle fractures between 2002 and 20003 were studied. The syndysmotic screw was removed at 6—12 weeks time post operatively. Post-operative complications and functional outcome were studied.

Results: Following removal of the syndysmotic screw six patients had superficial wound infection, four patients had pain due to instability, one patient had DVT and one patient had broken screw. The functional outcome using ankle scores compared to the other studies in the literature did not show any significant difference.

Conclusion: Syndysmotic screw removal has significant morbidity. Guidelines with randomised control studies are recommended.

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Early exercising in removable cast compared with immobilisation in cast after operative treatment of ankle fractures
A prospective randomised study

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Background: The aim of operative treatment for ankle fractures is to allow early movement after internal fixation. The hypothesis of this study was that early mobilisation facilitated by a removable cast after internal fixation of ankle fractures would improve functional recovery of patients compared with that after conventional immobilisation in a cast.

Material and methods: Sixty-two patients between the age of 17 and 65 years with ankle fractures that required operative treatment were randomly allocated to two groups: immobilisation in a non weight bearing below knee cast for 6 weeks or early movement in a removable cast (at 2 weeks after removal of sutures) for the following 4 weeks. The follow up examinations which consisted of subjective (clinical, Olerud—Molander score, AOFAS score, SF 36) and objective (swelling measurement, X-ray) evaluations were performed at 2, 6, 9, 12 and 24 weeks postoperatively. Time of return to work was recorded.

Results: There were no postoperative complications in the group treated with immobilisation in cast. There was one superficial wound infection treated with oral antibiotics in a patient with a previous dermatological condition around the fractured ankle in the group treated with early movement in a removable cast. Patients in group two (early movement) had higher functional scores at 9 and 12 weeks follow up but not of statistical significance. They also return to work earlier (55.5 days) compared with the ones treated in cast (98.7 days). Patients treated in removable cast had higher mean SF-36 scores, but this difference was significant only for two of the eight aspects investigated.

Conclusions: Early movement with the use of removable cast after removal of sutures in operated ankle fractures decrease swelling, prevent calf muscle wasting, improve functional outcome and facilitate early return to work of patients. Our findings support the use of a removable cast and early exercises in selected, compliant patients after surgery of the ankle.

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