Retained Continuous Infusion Popliteal Catheter for Hindfoot Surgery
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Precis/Summary:
This paper reports on a new technique for providing improved analgesia for patients undergoing hindfoot and midfoot procedures. Instead of the single bolus popliteal approach sciatic nerve block 72 hour block is maintained using a catheter and local anaesthetic pump allowing the patient to discharge comfortably within 24 hours of surgery.

Abstract:
Introduction: Adequate analgesia following hindfoot surgery can be difficult and conventional analgesics have significant side effects. A single bolus popliteal block of the neurovascular bundles is effective but short-lived. We report on use of a retained perineural catheter with continuous local anaesthetic infusion for pain relief post-operatively.

Materials and Methods: This 2 cohort observational study compares pain relief following single bolus dose popliteal block and retained continuous infusion perineural catheter. With the patient supine in the anaesthetic room a nerve stimulator identified the tibial and peroneal branches of the sciatic nerve which were blocked with 20mls 0.5% marcaine. In 31 patients a perineural catheter was left in situ and connected to a Stryker “Pain Pump” infusing 0.25% bupivacaine at a rate of 4 ml/hour with 1 ml/hour patient controlled boluses. Following discharge the catheter was removed by the community nurse at 72 hours post-operatively.

Results: Patients were asked to fill in Visual Analogue Scores for 72 hours post operatively. The mean pain score for the single block group was 4.9 (range 0-9). The mean pain score for the popliteal catheter group was 1.03 (range 0-5). One patient had an air-lock in the infusion tubing leading to pain once the initial block wore-off. One patient experienced a patch of numbness in the lower leg which resolved by the 2 week follow-up. There were no other complications, such as infection, from placement of the retained catheter. All patients were satisfied with their post-operative pain control.

Conclusion: We recommend this novel technique as an effective method of pain relief after ankle and hindfoot surgery. It reduces the need for opiate analgesics and leads to an earlier discharge from hospital. To confirm our findings we are running a randomised, double blinded, placebo controlled trial to study this method of pain relief.