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"A Randomized Controlled Trial Assessing the Efficacy of Surgeon-performed, Intraoperative Adductor Canal Blocks in Same-Day Discharge Total Knee Arthroplasty"

The use of regional anaesthesia, such as adductor canal blocks (ACB), in total knee arthroplasty (TKA) has been recommended to enhance surgical day care pathways by providing potential improvements in post-operative pain, early ambulation and a reduction in the length of stay. Routine incorporation of such regional anaesthetic techniques, however, may consequently increase time per case, cost, and requires the specialized skills of an anaesthesiologist trained in regional anaesthesia.

Recent radiological and cadaveric studies have suggested that intra-operative, surgeon-performed ACBs can be safely and reliably performed. Evidence supporting clinical equivalence to anaesthesia-performed ACBs, however, is very limited. As such, we devised a randomized control trial comparing intra-operative, surgeon-performed ACBs to conventional, anaesthesiologist-performed ACBs under ultrasound guidance for surgical day care TKA. The primary outcome of this study will be to compare mean visual analogue pain scores (VAS) and total morphine equivalents in the first 24 hours post-surgery. Additional functional outcomes and quality assessment measures will also be assessed in the two weeks after surgery. A total of 80 patients (40 per treatment arm) will be recruited to be powered to detect a minimal clinically important difference with a high-degree of accuracy for the primary study outcome assessed.