

Prospective Randomized Study Comparing Suprainguinal Fascia Iliaca Block vs. Pericapsular Nerve Group Block vs. Local Anesthetic Infiltration for Pain Control Following Total Hip Arthroplasty

Dear participant,

Thank you for considering taking part in our study.

Total hip replacement is one of the most common orthopaedic procedures, mainly performed to treat advanced arthritis of the hip. Even though total hip replacements are becoming increasingly popular, there is still room for improvement for managing pain associated with this surgery. Currently, multiple methods of pain control are being used, including local anesthetic infiltration (LAI) and peripheral nerve group (PENG) block, in addition to medications taken by mouth, such as acetaminophen, non-steroidal anti-inflammatory drugs and narcotics.

Suprainguinal fascia iliaca compartment block (FICB) is a newer technique that takes advantage of ultrasound to guide injection of anesthetic medications to temporarily block two or three nerves of the leg (the femoral nerve, the lateral femoral cutaneous nerve and, possibly, the obturator nerve). Even though available evidence shows that this block may be effective in pain control while also reducing the need for narcotics, it is not known whether FICB offers superior pain control compared to PENG block or LAI. Therefore, in this research study, we aim to directly compare the effectiveness of FICB, PENG block and LAI for pain control following total hip replacement.

You are *eligible* to be part of the study if you fulfill the following criteria:

- Adults, any gender, (≥ 18 years old) who requires an inpatient primary total hip arthroplasty under spinal anesthesia
- Provide Written consent

Patients who meet the following criteria will be excluded:

- Patients who require revision surgery
- Anesthesia other than spinal (general, epidural, other)
- Body mass index (BMI) $> 45 \text{ kg/m}^2$
- Allergies to study medication
- Previous fracture to affected area
- Previous surgery to the affected hip
- Diagnosis other than osteoarthritis (avascular necrosis, significant deformity such as post-Perthes, slipped capital femoral epiphysis, dysplasia classified as Crowe 3 or 4, or other diagnoses causing significant deformity of the femoral head or acetabulum)
- THA for hip fractures
- Patients taking daily opioid analgesics pre-operatively
- Anesthetist on day of surgery who does not perform FICB and PENG and no alternate anesthetist available to perform the block
- Patients who do not understand, read or communicate in either French or English

Should you choose to participate you will have a consultation with one of the physicians and a research assistant will explain the study and procedures in further detail. If you are interested in participating or would like further information, please contact the research co-ordinator at this email: sandhya.baskaran.comtl@ssss.gouv.qc.ca. Thanks again for your consideration.