**The dataset represents data from the study by Machi et al. “Discharge Readiness after Tricompartment Knee Arthroplasty”. *Anesthesiology* 2015; 123:444-56.**

**Dataset: Nerve Block**

Tricompartment knee arthroplasty, sometimes referred to as total knee replacement is a surgical procedure in which the worn out or damaged surfaces of the knee joint are removed and replaced with artificial parts. This surgery results in moderate-to-severe postoperative pain that often requires intravenous analgesics and impairs functional mobility, all of which can prolong hospitalization.

A continuous femoral nerve block is when a small catheter is inserted into the thigh and delivers local anesthetic, or numbing medicine, to the nerves. It can provide effective postoperative analgesia and is therefore widely used after knee arthroplasty. However, this modality induces quadriceps weakness and is associated with an increased risk of falling, leading clinicians to question its risk–benefit ratio and consider alternative analgesic approaches.

A relatively new alternative is an adductor canal block in which local anesthetic is deposited within an aponeurotic tunnel in the middle third of the thigh containing multiple afferent sensory nerves—but only a single efferent motor nerve: a branch innervating the vastus medialis of the quadriceps muscle. In both volunteers and surgical patients, a single-injection adductor canal block induces less quadriceps weakness and mobilization disability compared with a single-injection femoral nerve block.

Because pain after knee arthroplasty usually outlasts the duration of a single-injection nerve block, a perineural catheter is often introduced to allow prolonged local anesthetic administration. Previous studies have demonstrated the quadriceps-sparing benefit of the adductor canal infusions, but both limited infusion duration to ≤ 24 hours and evaluated mobilization a maximum of 24 hours. Because discharge readiness is rarely achieved within this time frame after tricompartment knee arthroplasty, it remains unknown whether the use of continuous adductor canal blocks will have any appreciable effect on readiness for discharge.

Therefore, a dual-center, randomized, active-controlled, parallel-arm clinical trial to test the hypothesis that a continuous adductor canal block decreases the time to attain four specific discharge criteria compared with a continuous femoral nerve block after tricompartment knee arthroplasty: (1) adequate analgesia; (2) independence from intravenous opioids; (3) ability to independently stand; walk 3 m, return, and sit down; and (4) independently ambulate 30 m, was conducted.

The study enrolled 80 adult patients scheduled for primary, unilateral, tricompartment knee arthroplasty whose postoperative analgesic plan included a perineural local anesthetic infusion. Subjects were randomized to one of the two treatment groups—*adductor canal versus femoral* perineural catheter—only if both locations were considered acceptable for catheter insertion. Randomization lists were created in blocks of four, with a 1:1 ratio, stratified by both treatment center and surgeon.

Failure to meet the following four criteria determines the majority of hospitalization days: (1) adequate analgesia (defined as numeric rating scale <4); (2) independence from intravenous opioids for at least 12 h; (3) ability to independently stand and sit down (evaluated with the Timed Up and Go test); and (4) unassisted ambulation of at least 30 m (evaluated with the 6-min walk test).

The primary endpoint of this study was the time from surgical stop until all four of these criteria were fulfilled without a reversion to unfulfilled status. These criteria were assessed at the end of each 8-h nursing shift: 08:00, 16:00, and midnight. Pain scores were recorded every 4 h and when subjects requested analgesics.

Secondary endpoints included each of the four individual discharge criteria of the primary endpoint, supplemental oral opioid consumption, attaining a standing position without assistance, passive knee flexion and extension (measured with a goniometer), catheter site leakage, and the incidence of catheter dislodgement.