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Pain, Analgesic Use, and Patient Satisfaction Following Hip Fracture Surgery

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Pain, Analgesic Use, and Patient Satisfaction With Spinal Versus General Anesthesia for Hip Fracture Surgery : A Randomized Clinical Trial

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Contributing Authors:

- MD Neuman, R Feng, SS Ellenberg, F Sieber, DI Sessler, J Magaziner, N Elkassabany, ES Schwenk, D Dillane, ER Marcantonio, D Menio, S Ayad, M Hassan, T Stone, S Papp, D Donegan, M Marshall, JD Jaffe, C Luke, B Shama, S Azim, R Hymes, KJ Chin, R Sheppard, B Perlman, J Sappenfield, E Hauck, MA Hoelt, A Tierney, LJ Gaskins, AD Horan, T Brown, J Dattilo, JL Carson
- Investigators REGAIN (Regional versus General Anesthesia for Promoting Independence after Hip Fracture)

Synopsis

One thousand six hundred patients undergoing surgery for hip fractures were randomized to receive either spinal anesthesia (n=795) or general anesthesia (n=805). Pain scores using the Numerical Rating Scale (NRS) were assessed from postoperative day 1 to 3 and again at 60, 180, and 365 days. Prescription analgesic use was measured at 60, 180, and 365 days postoperatively, and satisfaction with anesthesia care using the Bauer anesthesia satisfaction questionnaire at postoperative day 3 or discharge. Pain scores were similar between the two groups from 24 hours to 365 days postoperatively. The spinal anesthesia group presented with higher rates of analgesic use at 60 days. Satisfaction did not differ between the two groups.

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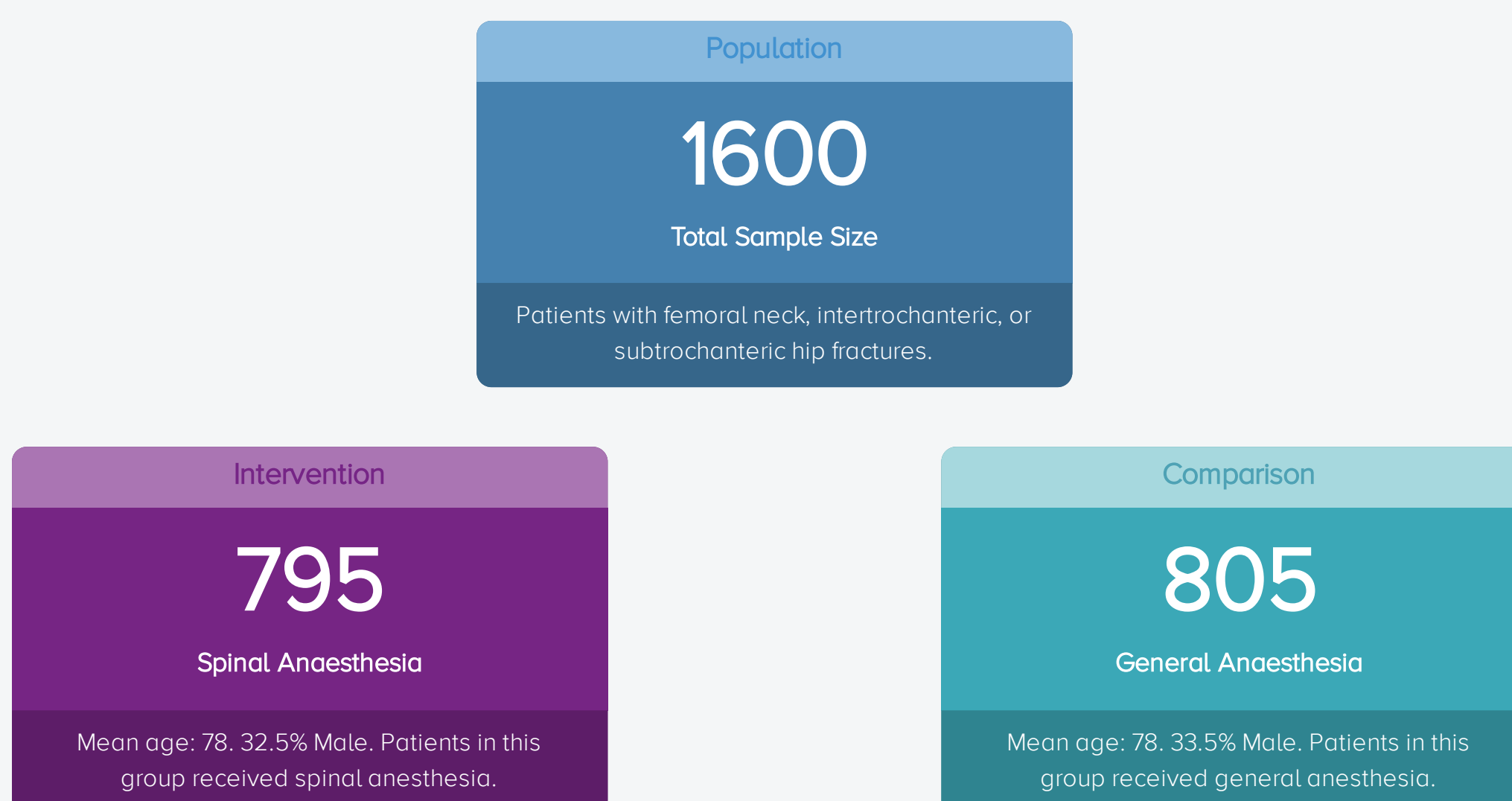
Why was this study needed now?

A large proportion of adults experience a hip fracture that needs surgical treatment. Patients are either given spinal or general anesthesia for this type of surgical procedure. Currently, there is limited evidence on the effects of spinal versus general anesthesia on pain, analgesic use, and satisfaction following a hip surgery after discharge. Previous studies have outlined the effects of these two anesthetic types on outcomes till the patient is discharged but few studies assess these outcomes at later time points. Therefore, a trial was of interest.

What was the principal research question?

In adult patients undergoing surgical repair for their hip fracture, what is the effect of spinal anesthesia on postoperative pain, analgesic use, and satisfaction after 60 days, compared to general anesthesia?

What were the important study characteristics?



- Outcomes**
- Numeric rating scale (NRS) - worst pain
 - Numeric Rating Scale (NRS) - average pain
 - Numeric Rating Scale (NRS) - current pain
 - Incidence of rescue analgesia
 - Incidence of drowsiness
 - Incidence of pain at the site of insertion
 - Incidence of thirst
 - Incidence of hoarseness
 - Incidence of sore throat
 - Incidence of nausea
 - Incidence of cold sensation
 - Incidence of confusion
 - Incidence of injection site pain
 - Incidence of shivering
 - Incidence of satisfaction with anesthetic care
 - Incidence of patient recommending treatment to friend
- Methods**
- RCT
 - Multi-Centered
- Time**
- Baseline
 - 1 Days
 - 2 Days
 - 3 Days
 - 60 Days
 - 180 Days
 - 365 Days

What were the important findings?

No significant differences were seen between the two groups after 24 hours postoperatively to 365 days with regard to pain scores. A greater proportion of individuals in the spinal anesthesia group reported the use of analgesics at 60 days postoperatively. Analgesic use at 180 and 365 days was similar between the two groups. With regard to satisfaction, a higher proportion of patients reported a severe sore throat in the general anesthesia group whereas, more patients in the spinal group reported severe shivering. Dissatisfaction with one or more aspects of the anesthesia the patients received, was similar between the two groups.

What should I remember most and how will this affect the care of my patients?

In patients undergoing hip fracture surgery, severe postoperative pain was experienced by both groups. Pain scores after 24 hours postoperatively to 365 days were similar and a higher proportion of individuals reported analgesic use at 60 days in the spinal anesthetic group. The results of this trial were limited by some missing data for each study outcome. Additionally, no data was collected on non-opioid analgesic use postoperatively. Overall, both clinicians should prioritize pain management strategies following hip surgeries.



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