



FASCIA ILIACA COMPARTMENT BLOCK VS INTRAVENOUS FENTANYL AS ANALGESIC TECHNIQUE TO FACILITATE SPINAL ANAESTHESIA IN PATIENTS UNDERGOING SURGERY FOR FEMUR FRACTURES

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ABSTRACT

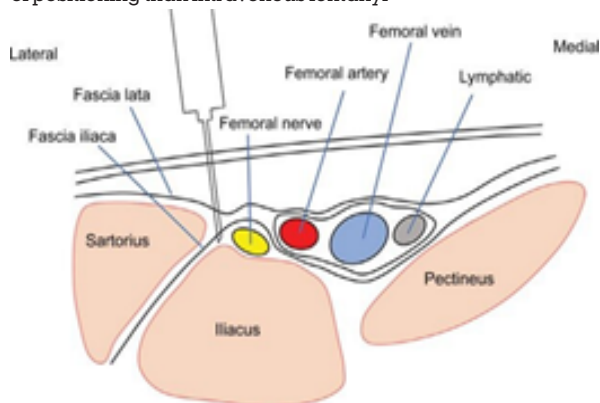
Femoral fracture is the most painful bone injury and performing spinal anesthesia is challenging due to poor positioning unless we provide a good analgesia. Intravenous strong opioids are commonly used but to date nerve blocks are also being utilized. The peripheral nerve Block- Fascia Iliaca Compartment Block Is more effective in reducing pain during positioning, shortening time to perform subarachnoid block, and increase the quality of positioning than intravenous fentanyl.

KEYWORDS :

INTRODUCTION

Spinal anaesthesia is the most commonly used anaesthetic technique of choice in orthopaedics for lower limb fractures. While regional anaesthesia has been shown to be more beneficial compared to general anaesthesia, patient positioning for neuraxial blockade may cause severe pain in patients with femur fractures. Various systemic analgesics are being used to provide pain relief during positioning in these patients. Among the systemic analgesics, opioids are widely used but they are known to be associated with side effects like cognitive impairment, vomiting, urinary retention, respiratory depression. Fascia iliaca compartment block is a simple, low skill and safe technique that can be used in the pre-operative setting. It blocks the femoral, lateral femoral cutaneous nerve and sometimes the obturator nerve.

Also, since the injection is done away from the artery and nerve, there are minimal chances of neurovascular injury. The present study showed that peripheral nerve blocks-FICB was more effective in reducing pain during positioning, shortening time to perform subarachnoid block, and increase the quality of positioning than intravenous fentanyl.



Aims And Objectives

To compare the pain scores during positioning for spinal anaesthesia using visual analog scale

To compare the quality of positioning using the quality score

- 0 = poor hip flexion,
- 1 = satisfactory hip flexion,
- 2 = good hip flexion, and
- 3 = optimal hip flexion.

MATERIAL AND METHOD

Study Design:- A Randomized Controlled trial.

Study Centre:- Department of Anaesthesiology, SAIMS & PG Institute, Indore.

Study Duration:- The study will be conducted for a period of

12 months approval by the Institutional ethics committee.

Inclusion Criteria

Age between 25-65yrs.

ASA grade 1-2.

Patients with proximal femur fractures posted for elective surgery under subarachnoid block. Patients who have given an informed consent.

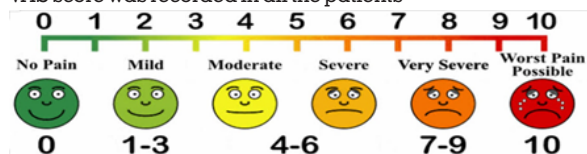
Exclusion Criteria

Known allergies to local anaesthetics or opioids. Open wounds or infections at the site of block. Patients contraindicated to spinal anaesthesia. Patients with comminuted or displaced fractures, fractures involving middle or lower 1/3rd

Methodology

40 Patients Undergoing Elective Femur Surgery And Fulfilling Inclusion Criteria Were Randomly Divided Into Two Groups. Detailed Pre Anaesthetic Checkup Done On Day Of Surgery. Preoperative VAS Score Was Recorded. FICB (n=20) received Block With 30 ml 0.25 Percent Bupivacaine 15 Min Before Subarachnoid Block. IVF (n=20) received Intravenous Fentanyl At 1 Micrograms Per Kg Of Body Weight 5 Min Before Subarachnoid Block. The degree of painless flexion was observed in all the patients and quantified using the score: 0 = poor hip flexion (< 30 degrees), 1 = satisfactory hip flexion (≥ 30 and < 60 degrees), 2 = good hip flexion (≥ 60 and < 90 degrees), 3 = optimal hip flexion (≥ 90 Degree).

VAS score was recorded in all the patients



Statistical Analysis

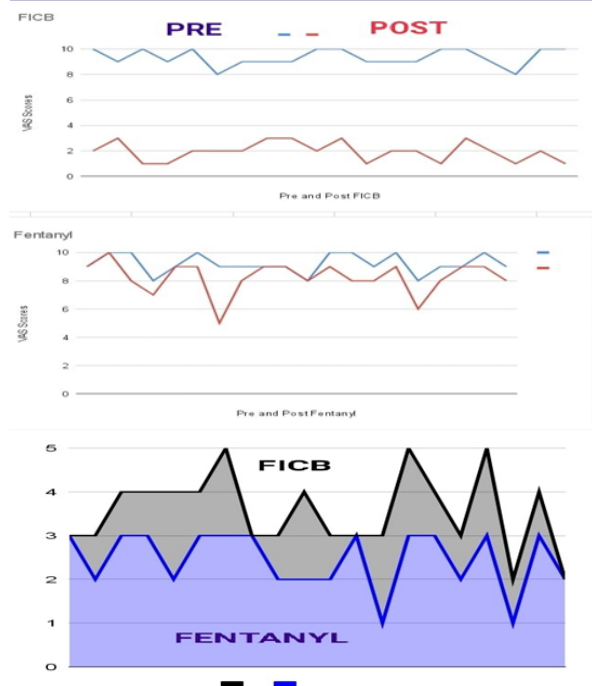
Data will be entered in to Microsoft excel sheet and analyzed using SPSS SOFTWARE 25.0 (TRIAL VERSION). Continuous data will be expressed in terms of mean and SD. Categorical data was expressed in form of proportions and percentage. Appropriate statistical test like UNPAIRED T test and Chi-square test was done and p value <0.05 was considered as statistically significant.

OBSERVATION AND RESULTS

Vas Scores

Pre-procedural VAS scores similar in both groups.

The drop in VAS score was significantly more in FICB group. [p=0.0043]



Quality Of Positioning

Quality of positioning was significantly better in the FICB group.[0.0048]

DISCUSSION

- The peripheral nerve Block- FICB was more effective in reducing pain during positioning, shortening time to perform subarachnoid block, and increase the quality of positioning than intravenous fentanyl.
- Today peripheral nerve blocks are recommended prior to positioning patients with a femoral fracture for spinal anesthesia and our study shows that FICB is as effective as nerve stimulator guided FNB. It allows clinicians, who have no access to nerve stimulator can use FICB using landmark technique.

CONCLUSION

- Preoperative FICB reduce the pain score during positioning, shortens time to facilitate spinal anesthesia, better patient positioning, and higher patient acceptance in patients undergoing elective femoral bone fracture surgery.
- We recommend FICB prior to spinal anesthesia positioning in patients undergoing elective femoral bone fracture surgery. Nonetheless, it is essential to carry out further high power ultrasound-guided studies.

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