

1. INTRODUCTION

Title

Comparative study of local infiltration analgesia (LIA) versus adductor canal block (ACB) versus combined (LIA + ACB) use following knee arthroplasty

Presenting Author

Dr Vikas Lodha
DNB Medanta The
Medicity, Gurgaon

Co Authors

Dr S. K. S. Marya, Dr Deep Arora, Dr
Chandeep Singh, Dr Shitij Kacker, Dr
Rahul Desai

Painless Rehabilitation is the key of Successful TKR

2. AIM AND OBJECTIVES

To find out a more efficacious analgesic modality with lesser side effects so faster and proper rehabilitation can be initiated and continued..

3. MATERIALS AND METHODS

Prospective observational study on 120 pts (40 in each group)

❖ ACB group (By Anaesthetist)

10 ml of 0.375% Ropivacaine followed by infusion of 0.375 % Ropivacaine @ 4-5 ml/hr

❖ LIA group (By Surgeon)

100 ml 0.2% Ropivacaine + Morphine 5mg + 1 ml Adrenaline (1:1000) + Ketorolac 30mg



Needle insertion under USG guidance



Insertion of epidural catheter after USG confirmation

❖ Combined group

50 ml 0.2% Ropivacaine + Morphine 2.5mg + 0.5 ml Adrenaline (1:1000) + Ketorolac 15 mg and continuous adductor canal block following total knee arthroplasty as 10 ml of 0.375% Ropivacaine followed by infusion of 0.375 % Ropivacaine @ 4-5 ml/hr



Subcutaneous tissue



Medial posterior capsule



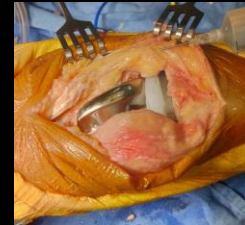
Lateral posterior capsule



Supra patellar pouch



Fat pad



Medial retinaculum



Lateral retinaculum

Figures: showing Intra-op LIA Insertion

Analgesic Efficacy

- ❖ Combined group has significantly better analgesic efficacy than **ACB** group at **12 hrs**
- ❖ Combined and **LIA** both groups are significantly better analgesic than **ACB** at **12 and 24 hrs**

4

R

E

S

U

L

T

Fentanyl Consumption via PCA pump

- ❖ Combined group consumed significantly lesser amount than **ACB** in **0-6 hrs, 6-12 hrs, 12-24 hrs**
- ❖ **LIA** better than **ACB** in initial **0-6 hrs**

No significant difference for:-

Demographic parameters, WOMAC scoring, knee ROM, complications

5. CONCLUSION

In conclusion, analgesic effect by combined ACB and LIA group for TKR was superior and associated with a greater reduction of opioid consumption post operatively than LIA and ACB group alone without any significant difference in complication.

6. ACKNOWLEDGEMENT

- Sawhney M, Mehdian H, Kashin B, Ip G, Bent M, Choy J, McPherson M, Bowry R. Pain after unilateral total knee arthroplasty: a prospective randomized controlled trial examining the analgesic effectiveness of a combined adductor canal peripheral nerve block with periarticular infiltration versus adductor canal nerve block alone versus periarticular infiltration alone. *Anesthesia & Analgesia*. 2016 Jun 1;122(6):2040-6.
- Xing Q, Dai W, Zhao D, Wu J, Huang C, Zhao Y. Adductor canal block with local infiltrative analgesia compared with local infiltrate analgesia for pain control after total knee arthroplasty: a meta-analysis of randomized controlled trials. *Medicine*. 2017 Sep;96(38)
- Zhou M, Ding H, Ke J. Adductor canal block in combination with posterior capsular infiltration on the pain control after TKA. *Irish Journal of Medical Science (1971-)*. 2018 May 1;187(2):465-71.
- Andersen HL, Gyrn J, Møller L, Christensen B, Zaric D. Continuous saphenous nerve block as supplement to single-dose local infiltration analgesia for postoperative pain management after total knee arthroplasty. *Regional anesthesia and pain medicine*. 2013 Mar 1;38(2):106-11