



Effectiveness of intraoperative periarticular infiltration in Total Hip Arthroplasty (THA): A clinical audit

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Background

Pain control after THA is pivotal in rehabilitation. Analgesics play an important role in pain control. The selection of those analgesics also a significant area in the treatment. This article will discuss about one of the analgesia in the pain management.

Analgesia modalities after THA

- Epidural analgesia
- Opioid Administration
- Peripheral nerve blocks
- Per articular infiltration.

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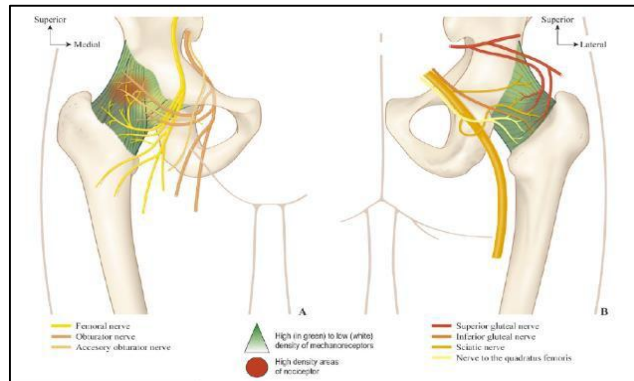


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Types	Advantages	Disadvantages
Epidural analgesia	Prolongation of analgesia Good pain relief and relaxation	Pruritis, Urinary retention
Opioid administration	Good pain relief	Nausea, sedation, Respiratory depression drowsiness
Peripheral nerve block	Good pain relief	Neurovascular injury
Periarticular infiltration analgesia	Excellent pain relief	Chances of infection

Periarticular cocktail injection will work on sensory innervation of hip joints they are, Sensory receptors: mechanoreceptors and nociceptors.

Anterior capsule having higher density of receptors they are the primary pain generators of hip joint by Pericapsular nerve group block (PENG).



	Anterior Capsule			Posterior Capsule		
	Medial	Central	Lateral	Medial	Central	Lateral
Mechanoreceptor						
Superior	++	+++	++++	+	++	++++
Inferior	+	++	+++	++	++	++
Nociceptor						
Superior	+++	++++	+++	0	+	+
Inferior	++	+++	++	+	+	+

1. Aim

To Assess the Efficacy of intraoperative Anterior capsular periarticular cocktail injection after THA

1.1 Parameters

- Pain on the day of operation (VAS score) Time taken for mobilization
- Hospital stay duration Complication

1.2 Materials

Study Type: Observational outcome study

Place: Kauvery Hospitals, Trichy, Tamil Nadu

Duration: 2019-2024

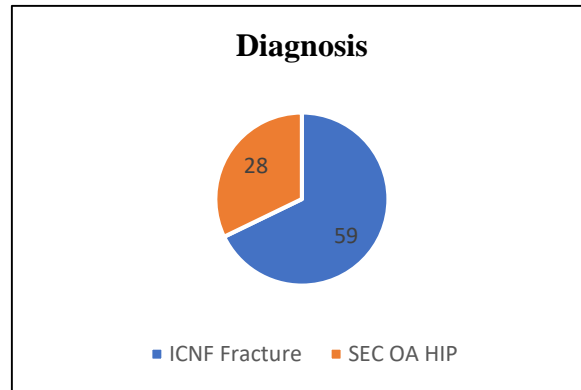
Sample Size: 87 patients

Inclusion criteria: Primary THA

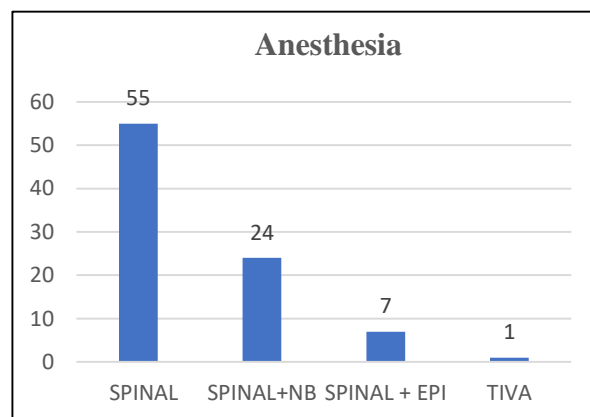
Exclusion criteria: Revision THA

3.Results and Discussion

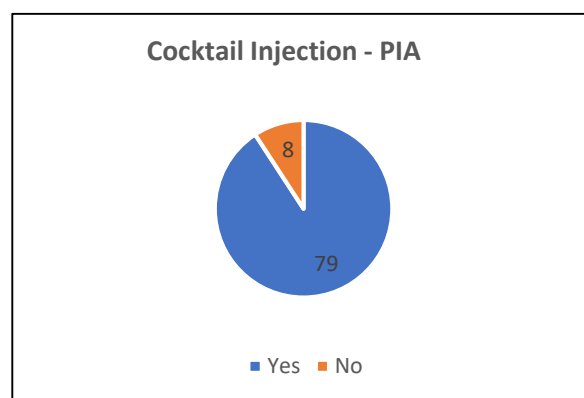
3.1 Diagnosis



3.2 Anesthesia



3.4 Cocktail Injection



4.Technique of THA

- Spinal anesthesia
- Lateral position

- Posterior approach
- Bleeding control - Trenexemic acid
- Antibiotic prophylaxis - cefotaxime +sulbactam
- DVT - mechanical prophylaxis
- POD-0 >> physio rehab exercises

5. Technique of Cocktail Injection

Content - 70m

- 38ml – Normal Saline
- 25ml – Ropivacaine
- 4ml – Dexamethazone
- 2ml – Ketorolac
- 1ml – Clonidine

Anatomical Zones

- Anterior capsule –outside
- Anterior femur
- Anterior acetabulum
- Subcutaneous tissue



PAIN SCORE SHEET

Date: 10.1.2020
Time: 11:15pm

No pain
 Mild pain
 Moderate pain
 Severe pain
 Worst pain imaginable

TIME	Analgesic Lockdown (After Surgery)	Signature
11:15 AM	10 - 100mg Arthroscopic / Surgery	J. Santol
	4 - 5 - Call Duty Doctor 4 - Review Medication 3 - Patient Medication 4 - Give SCB drugs	
	7 - 10 Call Duty Doctor (with or with outine Program) 4 - 5 - Call Duty Doctor 4 - Review Medication 1 - 3 - Patient Medication 4 - Give SCB drugs	

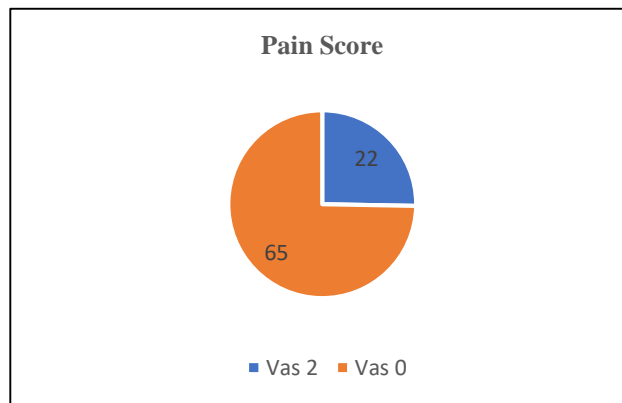
6. Standard Post Op Protocol

- Medicines (Paracetamol, Tramadol, NSAIDS in selected patients)
- Physio on the day of surgery
- No catheterization (except with epidural)
- Early discharge

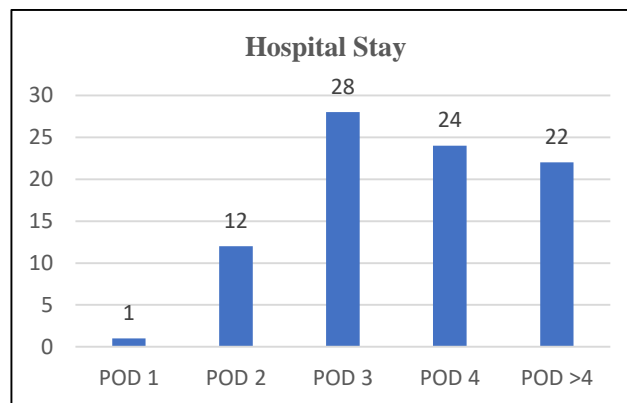
7. Methods

- Pain score with VAS & faces scale
- Length of stay post-surgery
- Mobilization delay (or absence)
- Complication related to surgery and PAI

7.1 Pain on POD - 0

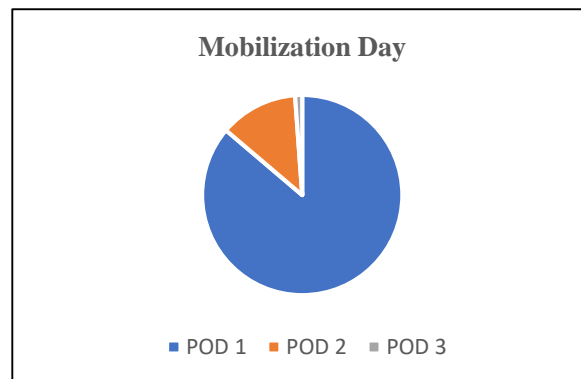


7.2 Hospital Stay



	POD 1	POD 1	POD 1	POD 1 and More
OA HIP (28)	0	7	13	8
ICNF Fracture (59)		7	12	39

7.3 Mobilization



8. Complication

- Foot drop in one patient – Approach related
- Quadriceps weakness – PAI addition to PENG Block
- infection -NIL
- DVT -NIL
- Bed sore-NIL

9. Summary of Results

- Least possible post-operative pain
- Hospital stay
- Patient satisfaction
- Postoperative complication
- Better rehabilitation

10. Conclusion

This Study of PAI in THA has not been widely studied in Indian literature, Nor Reported in Published literature

The study showed that PAI in THA

- Is Safe and Effective
- Anterior Capsular infiltration is sufficient and Safe
- Early Mobilization is not impeded
- Has no complication

11. Review of Literature

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