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COMPARITIVE STUDY OF 0.25% BUPIVACAINE WITH DEXAMETHASONE AND O.25% BUPIVACAINE WITH CLONIDINE FOR TRANSVERSUS ABDOMINIS PLANE BLOCK AS POST-OPERATIVE ANALGESIA IN PATIENTS UNDERGOING LSCS.

Anaesthesiology

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ABSTRACT

Introduction: To compare 0.25% bupivacaine with dexamethasone and 0.25% bupivacaine with clonidine for TAP block as post-operative analgesia in patients undergoing LSCS. **Study Design:** A randomized prospective controlled study was conducted in 100 patients undergoing LSCS. Participants were divided into 2 groups. Group A received 0.25% bupivacaine with dexamethasone 4mg.Group B received 0.25% bupivacaine with 75mcg clonidine. The postoperative pain was evaluated by VAS scoring. **Results:** The average duration of analgesia with TAP block for overall study population was 316.15min. The average VAS score in patients who received 0.25% bupivacaine with dexamethasone was 1.50 which is significantly lower than for whom received 0.25% bupivacaine with clonidine which is 1.95. Further the duration of analgesia is longer in Group A than Group B. **Conclusion:** TAP block is safe and effective way of relieving postoperative pain in LSCS patients. Addition of dexamethasone to bupivacaine significantly enhances its effect in terms of block quality and analgesia duration as compared to clonidine.

KEYWORDS

LSCS , POSTOP ANALGESIA , TAP BLOCK, 0.25%Bupivacaine, Dexamethasone, Clonidine.

INTRODUCTION:

Patients undergoing lower segment caesarean section experience moderate to severe pain in the early post-operative period. A number of modalities have been tried over years to reduce post-operative pain like IV Analgesics with NSAIDS and Opioids, Surgical site infiltration, Epidural Analgesia, transversus abdominis plane block. The TAP block have been shown to reduce pain and post-operative opioid use following LSCS. The block was first described in 2001 by Dr.Rafi and the technique involved indentification of triagle of petit. A pop sensation is felt while passing through triangle with needle indicates entry into correct facial plane. Clonidine is an Imidazoline and alpha2 agonist which can cause hypotention, sedation and bradycardia. Dexamethasone is a corticosteroid and has anti-inflammatory action, antipyretic action and also immunosuppressive effects.

AIMS AND OBJECTIVES:

AIM:

To compare 0.25% Bupivacaine with dexamethasone and 0.25% Bupivacaine with clonidine for USG guided Transversus abdominis plane block as post-operative analgesia in patients undergoing LSCS.

OBJECTIVES:

1. To compare analgesic Efficacy of Dexamethasone versus clonidine as adjunct to Bupivacaine for TAP block.
2. Assessment of pain relief using VAS score.

Inclusion Criteria:

1. ASA grade 1 and 2
2. Patients undergoing LSCS.

Exclusion Criteria:

1. Known allergy to local anaesthetic agents
2. patients who received any NSAIDS and Opiods 48hrs prior surgery
3. Failed block
4. Any contraindications to spinal anaesthesia.

Study Design:

Prospective Randomized controlled double blind study.

Place Of Study:

Siddhartha Medical college,Vijayawada.

Duration Of Study:

January 2022 to August 2022.

METHODS:

After obtaining Ethical committee approval and written informed consent, 100 pregnant women of ASA grade 1 and 2 aged between 18 to 40yrs,posted for elective LSCS at term were randomized into 2 groups by simple random sampling using ideal bowl method.

The patients were shifted to operation theatre and monitors were connected to record baseline vitals. All patients received Ringer lactate 10ml/kg within 30 min before surgery from a 18 Gauge IV line.

All patients underwent LSCS under spinal Anaesthesia with 0.5% Bupivacaine. At the end of surgery Transversus abdominis plane (TAP) block was given using USG guided technique.

After identification of triangle of petit, a 22 gauge needle was inserted perpendicular to the skin just above the iliac crest. As advanced further a double pop sensation is appreciated which indicated needle to be within transversus abdominis plane.

- Group A received 20ml 0.25% Bupivacaine with Dexamethasone 4mg.
- Group B received 20ml 0.25% Bupivacaine with Clonidine 75mcg.
- The post-operative pain was evaluated by visual analogue scale (VAS) for pain scoring at every 2hrs for 12hrs.

RESULTS:

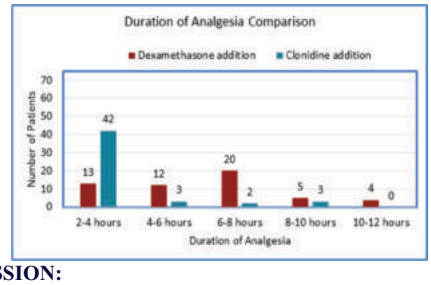
Duration of Analgesia (Group Wise):

Duration of Analgesia	Groups (Frequency N)				Total N
	A Dexamethasone addition		B Clonidine addition		
	Frequency N	%	Frequency N	%	
2-4 hours	13	24.10%	42	84.00%	55
4-6 hours	12	22.20%	3	6.00%	15
6-8 hours	20	37.00%	2	4.00%	22
8-10 hours	5	9.30%	3	6.00%	8
10-12 hours	4	7.40%	0	0.00%	4
Total	54	100.00%	50	100.00 %	104

RESULTS:

- The statistical analysis shows that post-operative analgesia persisted only for 2-4 hrs in 84% of the patients in group A.
- The average VAS score in patients who received dexamethasone was 1.50 which is significantly lower than those who received clonidine that is 1.95.

- Hence the duration of analgesia is longer with dexamethasone as adjunct than clonidine.



DISCUSSION:

TAP block has been shown to reduce postoperative pain scores and opioid consumption allowing for early ambulation and faster discharge.

Various modalities of giving TAP block include: Landmark technique, USG guided, catheter placement and surgeon assisted techniques.

Clonidine is a centrally acting alpha2 agonist and has attracted interest as an adjunct to anaesthesia.

Steroids potentiate the action of local anaesthetics through modulation of potassium channels in excitable cells.

Use of an effective TAP block can minimize the use of opioids which are associated with high incidence of adverse effects.

CONCLUSION:

TAP block is a safe and effective way of relieving of post-operative in LSCS patients and addition of Dexamethasone to bupivacaine significantly enhances its effects in terms of block quality and analgesia duration. TAP block has opioid sparing effects.

In addition to this, supplementation of dexamethasone to bupivacaine significantly increased duration of analgesia when compared to clonidine.

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