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Research Article

To Compare the Rescue Analgesia used in Post-Operative Period of Dexmedetomidine and Clonidine as an Adjuvant to Intrathecal Bupivacaine in Patients Undergoing Total Abdominal Hysterectomy

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Abstract

Background: Spinal block is the first choice for lower abdominal surgeries. Bupivacaine is the most common local anaesthetic used but has a shorter duration of action. Many adjuvants have been used to improve the quality of analgesia till postoperative period. In this study, we used α2-agonists.

Methods: A prospective randomized single blind study was conducted in the Department of Anaesthesia IGMC SHIMLA at Kamla Nehru state hospital.

Results: Injection PCM 1gm was used as rescue analgesic if VAS ≥4 was achieved in any patient. In Group C 10 patients received Inj PCM as compared to 8 patients in Group D. One patient in each group received 1 dose, 5 in Group C and 2 in Group D received 2 doses and 4 in Group C and 5 in Group D received 3 doses of Inj PCM in 24 hrs postoperative period. (p=0.693).

Conclusion: We concluded that the rescue Analgesia used in post operative period.

Keywords: Dexmedetomidine, Clonidine, Bupivacaine, Rescue Analgesia

Introduction

Hysterectomy is the most frequently performed gynecologic surgical procedure. It has a broad spectrum of indications ranging from benign tumours to malignant gynecological diseases. Hysterectomy is most often indicated when medical treatment or less invasive methods have failed[1]. Abdominal hysterectomy is often a long duration procedure and warrants intense pain relief in the peri and post-operative period.

Among various type of regional anaesthesia single shot spinal anaesthesia is still the first choice for lower abdominal / lower limb surgery because of its rapid onset, superior blockade, lower risk of infections, lesser failure rate and cost effectiveness. It blunts the stress response to surgery and decreases the incidence of postoperative thromboembolic events. It also provides rapid and adequate surgical anaesthesia, early ambulation after surgery and the ability to void enables the patient fit for discharge early[2, 3]. Major drawback of single shot spinal anaesthesia is its short duration of block and lack of postoperative analgesia. Due to this intrathecal adjuvant have gained popularity which aim at prolonging duration of block, better success rate and fast postoperative recovery. Local anaesthetic, bupivacaine, is the most common agent used for spinal anaesthesia but has

relatively short duration of action. Many adjuvants to local anaesthetics have been used intrathecally to improve the quality of intraoperative analgesia and prolong it in the postoperative period[4, 5].

Material And Methods

A prospective randomized single blind study was conducted in the Department of Anaesthesia IGMC SHIMLA at Kamla Nehru state hospital.
A total of 90 patients were divided randomly into two groups:
Group C and **Group D**
Group C patients received 3ml (15mg) of bupivacaine heavy with 0.2ml (30µg) clonidine.
Group D patients received 3ml (15mg) of bupivacaine heavy with 0.2ml (5µg) DEX.

Study Period: For period of 1 year [2020-2021]

Inclusion Criteria

1) Patients willing to give consent for study
2) Age between 35-60 years.
3) ASA I and ASA II patients.

Exclusion Criteria

1) Hypersensitivity to the study drugs
2) Patients having any bleeding disorders
3) Patient having decreased platelet counts(≤50, 000/µl)
4) Patients undergone any spine surgery
5) Infection at local site
6) Patients on beta blockers

Result

Table 1: Socio-demographic profile of the patients in the study group

	Group C (Mean±SD)	Group D (Mean±SD)	P value
Age	47.11±7.92	48.20±6.70	0.484
Weight	57.22±3.75	59.48±4.88	0.061
ASA Grade(I:II)	33:12	33:12	0.99

Injection PCM 1gm was used as rescue analgesic if VAS ≥4 was achieved in any patient. In Group C 10 patients received Inj PCM as compared to 8 patients in Group D. One patient in each group received 1 dose, 5 in Group C and 2 in Group D received 2 doses and 4 in Group C and 5 in Group D received 3 doses of Inj PCM in 24 hrs postoperative period. (p=0.693).

Table 2: Rescue Analgesia used in post operative period (24 hrs)

Variable	Group C (N%)	Group D (N%)	P value
Nil dose	35 (77.8)	37 (82.8)	0.693
Inj PCM 1gm dose	1 (2.2)	1 (2.2)	
2 gm (2dose)	5 (11.1)	2 (4.4)	
3 gm (3 Dose)	4 (8.9)	5 (11.1)	

Discussion

Injection PCM 1gm was used as rescue analgesic if VAS ≥4 was achieved in any patient. In Group C 10 patients received Inj PCM as compared to 8 patients in Group D. One patient in each group received 1 dose, 5 in Group C and 2 in Group D received 2 doses and 4 in Group C and 5 in Group D received 3 doses of Inj PCM in 24 hrs postoperative period. (p=0.693). Our study concurs with the study conducted by Grandhe *et al*., and here, the authors observed that the mean duration of analgesia is 3.8 ± 0.7 h in the control group and 6.3 ± 0.8 h when using clonidine of 1 µg/kg with a mean weight of 60.6 ± 19.4 kg. Mean motor onset was faster in Group D and slowest in Group B and difference was statistically significant.[6] In studies by Al-Mustafa *et al*. in the dexmedetomidine group and Al-Ghanem *et al*. in the clonidine group, authors saw that there was a significant decrease in the meantime for onset of motor blockade.[7,8]

Conclusion

We concluded that the rescue Analgesia used in post operative period.

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