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STUDY TO KNOW THE EFFICACY OF LOCAL BUPIVICANE INFILTRATION ON WOUND IN MANAGING PAIN POSTOPERATIVELY AFTER CAESAREAN SECTION

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Abstract:

Objectives: *To compare the local infiltration of bupivacaine with placebo in a caesarean section under spinal anesthesia in terms of the purpose of the study, mean pain scores and analgesic requirement.* ***Study schedule:*** *Randomized controlled*

Place and time of study: *Gynecology and Obstetrics Department, Nishter Hospital, Multan. All patients from OPD, Emergency and high risk Ward were accepted from March 2016 to March 2017.*

Findings: *In our study, 86% (n = 43) patients in Group A and 82% (n = 41) 18 (n = 9) were between the ages of 31 and 45 years, with mean ± SD being 26.52 ± 4.54 in Group A and 26.88 + 4.16 in Group. B. The pain score comparison in both groups was calculated as 1.98 + 0.91 in Group-A, 2.8 + 1.23 in Group-B, 0.00026 in p-value and showed a significant difference between these groups. The two groups were also calculated to have a p value of 0.00057 when the analgesic requirement was compared in both groups, 32.00 mg + 51.27 and in Group-B 82.00 mg + 84.97 tramadol, respectively. there is a significant difference between the two groups.*

Conclusion: *Local infiltration of bupivacaine with the wound was significantly more effective than placebo in relieving postoperative pain and resulted in decreased post-cesarean analgesia requirement.* ***Key words:*** *cesarean section, spinal anesthesia, wound infiltration, analgesia requirement.*

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INTRODUCTION:

Cesarean delivery is becoming more common. It will lead to an improved painkiller that is worth investigating where you need to place your excitement in an activity and your mom needs to quickly establish a bond with your baby. Any intervention possible.1. The caesarean section maintains its uncertainty as the most appropriate method for post-natal pain relief. Opioid analgesics remain the mainstay of treatment despite side effects. Opioid dependence and fear of respiratory depression usually lead to under postoperative yaws therapy. local anesthetic technique provides good postoperative analgesia with few side effects. Local anesthetics may be applied as an adjunct to other methods of postoperative pain relief, but reports on the effectiveness of this strategy may be contradictory. This study attempted to compare the local infiltration of the bupivacaine, placebo, and the wound site during cesarean delivery under spinal anesthesia in terms of mean pain scores and analgesic requirement. Cesarean section surgery is a common surgical procedure and rates are increasing worldwide. According to a comparative study conducted at a tertiary hospital in Nawab Shah, cesarean section rate was 36.96% in 2010, cesarean previous indications for cesarean, power delivery, fetal distress, placenta previa and breech. post-cesarean post-operative pain continues to be one of the most important problems and is a current issue for pain management. It is important that the anxiety of the patient is reduced and helped rapid recovery without complications is a good post-operative pain reliever. Surgery also reduces stress response. The most appropriate method for the treatment of post-caesarean pain is uncertain. Opioid analgesics are the basis of treatment despite side effects. Opioids are associated with many side effects such as dizziness, respiratory depression, ileus, nausea, vomiting, pruritus and urinary retention. Due to the lack of side effects caused by good analgesic properties and opioids, local anesthetic drugs are increasingly used in the treatment of surgical pain. Local anesthetic injection into the wound alleviates the pain by direct inhibition of harmful impulses from the injury area. Many studies have reported the use of protective local anesthetics to relieve postoperative pain with results from being so beneficial as to provide any benefit. Studies show conflicting results regarding the efficacy of wound infiltration with bupivacaine in reducing postoperative opioid requirement and decreasing postoperative pain scores. While some studies show high efficacy, others report that infiltration of the wound is not equally effective. The aim of this study was to evaluate the efficacy of local infiltration of the wound with 20 ml of 0.5% bupivacaine after cesarean section in postoperative pain scores and postoperative narcotic needs Local.

METHODOLOGY:

Operative definitions Local infiltration of the wound: Before closing the abdominal wall incision, the peritoneum, subcutaneous tissue and skin were infiltrated with 20 ml of 0.5% bupivacaine. Pain score: Using the visual analogue scale (0-10), the average pain score was measured at 24 hours.

Analgesic requirement: The total tramadol dose taken by the patient within 24 hours is measured as the average dose required. Tramadol was administered at the request of the patient. Size of the sample: With the help of the WHO Sample Size Calculator, the calculations are described below. Proportion of population = 5% proof Proof power = 90% Standard deviation grouped = 1.15 population Population total value = 25 Estimated average population = 3.75 Sample size = n = 50 patients in each group = 100 patients). Data collection procedure: Informed consent was obtained from all patients. The information was collected in a structured format and contained demographic data. High-risk chambers with caesarean section were included in the delivery room and emergency patients. The caesarean section technique has been standardized. The number of patients included was randomized into 2 groups of 50 patients each using the lottery method. One group was labeled as group A and the other as group B. It was a single blind study, so the patients did not know which group they entered. For Group A patients, 20 ml of 0.5% bupivacaine was infiltrated into the peritoneal, subcutaneous tissue and directly under the direct vision before closing the abdominal wall incision.

Patients in group B did not receive local infiltration of the wound. Both groups received intravenous tramadol at normal dose of 400 mg / 24 h in 3-4 divided doses within the first 24 hours after cesarean section. Upon request, tramadol was administered according to the patient's wishes. Postoperative pain was measured using a visual analogue scale (not representing pain and 10 most intense pain) at 4, 12, and 24 hours on the cesarean section, and the result was measured after 24 hours. The amount of tramadol used was also measured in both groups at the same time. The findings were recorded in the proforma.

Sampling Collection

Inclusion Criteria	
• Gestational Age at term (37-42)	• Age 18-45 years
• Elective and Emergency Caesarean Sections	• Any parity
• Spinal Anaesthesia	• ASA I and II
Exclusion Criteria	
• General Anaesthesia	• ASA III
• Known allergy to tramadol or bupivacaine	

Data analysis procedure: data were analyzed with SPSS (version 13). The mean + SD was calculated for quantitative variables such as visual analog scale pain scores and the amount of tramadol used on demand. Both groups were compared in terms of tramadol demand on pain and demand using the independent sample t test. P value <0.05 was considered significant.

RESULTS:

In terms of mean pain scores and analgesia requirement, a total of 100 patients were recorded during the cesarean section under spinal anesthesia, which met the inclusion / exclusion criteria for local infiltration of placebo and placebo. The distribution of patients according to their ages was between 18 and 30 years in Group A (n = 43) and 82% in Group B (n = 41) and 18% (n = 9) in the age group of 31-45 years. Mean + SD in Group-A was 26.52 + 4.54, and 26.88 + 4.16 in Group-B.

Table No I: Age Distribution (n=100)

Age (in years)	Group-A (n=50)		Group-B (n=50)	
	No. of patients	%	No. of patients	%
18-30	43	86	41	82
31-45	7	14	9	18
Total	50	100	50	100
Mean±SD	26.52±4.54		26.88±4.16	

A comparison of pain scores was recorded in both groups, 1.98 + 0.91 in Group-A, 2.8 + 1.23 in Group-B, 0.00026 in p-value and showed a significant difference between these groups. two groups (Table No II)

Table no II: Comparison of pain score in both groups (n=100)

Mean Pain score	Group-A (n=50)	Group-B (n=50)
	1.98+0.91	2.8+1.23

P value=0.00026

The analgesic comparison in both groups was calculated to be 0.00057 in group A and 51,27 84,97 82.00mg, 32.00mg, p value, showing a value of 0.00057 in the tramadol group B administered in the case of the patient's request. (Table No III).

Table no III: Comparison of Requirement of Analgesia In Both Groups(n=100)

Analgesia requirement (in mg)	Group-A (n=50)	Group-B (n=50)
	32.00+51.27	82.00+84.97

P value=0.00057

DISCUSSION:

Pain after cesarean section is an important problem in obstetrics. Various studies have shown the importance of adequate postoperative analgesia for mobilization, rehabilitation, and also the length of the hospitalaria.13 has been reduced to improve the connection between the mother and the newborn. Initiatives Local anesthetics have been used to support postoperative pain relief other methods have been made to see the effect of cesarean local anesthesia to improve pain relief and recovery postoperatoria.14, but reports on the effectiveness is contradictory to this strategy. . This study attempted to compare the local infiltration of the bupivacaine, placebo, and the wound site during cesarean delivery under spinal anesthesia in terms of mean pain scores and analgesic requirement. Group A was 86% (n = 43) in our study, 82% (n = 41) in Group B, 14% in Group A (n = 7) n = 9), aged between 31 and 45 years. Mean + SD in Group-A was 26.52 + 4.54, and 26.88 + 4.16 in Group-B. In both groups, the pain score was calculated as 0.00026, which shows a significant difference between p-value and 1.98 + 0.91 as a comparative Group-A and 2.8 + 1.23 in Group-B. Finally, in both groups the analgesic requirement 32.00mg + 51.27 in Group B, 82.00mg in Group B + 84.97 in tramadol, p value was calculated as 0.00057, indicating a significant difference between these two groups. According to another study, the mean VAS value at 24 hours was 3.7 + 1.3 for bupivacaine and distilled water versus 2 + 1, respectively. The amount of tramadol used at 24 hours was 98 mg + 26.65 vs 225 mg + 46.57. for bupivacaine and control groups, respectively. Postoperative analgesia requirement and pain score are significantly lower in patients with local infiltration with bupivacaine compared with placebo during cesarean section under spinal anesthesia. Another study by Anthony Akinloye Bamigboye et

al. Investigated the effect of wound infiltration of the local anesthetic agent and / or abdominal nerve block on post-cesarean pain and maternal health and its interaction with the baby. Local anesthesia and infection of the abdominal nerve blocks have been found to be useful for cesarean section by reducing the use of opiate as regional analgesia and general anesthesia complex. While some studies show variable results for bupivacaine use after cesarean section, there are no differences or small differences between cases and controls. The mean VAS for 24-hour pain was 2.38 + 0.75 versus 2.06 + 0.98 for bupivacaine and control groups, respectively. The mean total opioid analgesics used by bupivacaine and normal saline groups at 24 hours were 19.4 mg and 21.4 mg, respectively, and did not show a statistically significant difference.15 In a similar way, a meta-analysis 19 Incision against incision studies after incision Postoperative application of local anesthetics required infiltrations He did not support. The reason is that only four studies have a reduction in pain, a decrease in analgesic consumption, or a delay in analgesics in this meta-analysis until analgesic is the first request. The effectiveness of local infiltration with 20 ml 0.5% bupivacaine after cesarean is significantly higher in postoperative pain scores and postoperative narcotic needs, which may help recommend local use and hypothesis. The study also suggests that "local infiltration with bupivacain is better in relieving postoperative pain and requires less post-cesarean analgesia" and suggests that it should be used in the future to control postoperative pain. More studies are needed to see the efficacy of bupivacaine in relieving pain in postoperative cesarean section surgery.

CONCLUSION:

We concluded that the local infiltration of bupivacaine with the wound was significantly more effective in reducing postoperative pain than placebo and that the need for post-cesarean analgesia decreased.

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