

## Original Article

### Comparative Study of Patients Undergoing Check Curettage for First Trimester Incomplete and Inevitable Abortion Under Paracervical Block Versus No Anesthesia

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#### ABSTRACT:

**Background and Aim:** Performing check curettage on a dilated cervix without anesthesia has been suggested as a potentially safe option with minimal negative effects on the patient. The aim of this study was to examine and compare the level of pain felt during a paracervical block, both with and without anesthesia. **Material and Methods:** The study involved a total of 40 patients, evenly divided into two groups of 20 patients each. The patients in the control group were administered paracervical blocks at various positions around the cervicovaginal junction. In another study group, 20 participants received the paracervical injection using 10 ml of normal saline at each point. The pain score for the entire procedure was documented using the numeric rating scale following the surgery. **Results:** There was no significant difference between the two groups in terms of their preference for increased anesthesia ( $p=0.069$ ). In the control group, where higher anesthesia was not needed, the average procedure time was 13 minutes. During the procedure, it was noted that there was a significant rise in heart rate in the study group following the administration of the paracervical injection. While performing the procedure to remove tissue from the uterus, there was a significant rise in the occurrence of rapid heart rate in the group being studied. **Conclusion:** The check curettage procedure for first trimester incomplete abortions with an open internal os can be safely performed without anesthesia, as it does not cause any significant pain.

**Key Words:** Anesthesia, Cervicovaginal Junction, Curettage, First Trimester

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#### INTRODUCTION

Dilation and curettage (D&C) is a commonly performed invasive procedure. This procedure is suitable for pregnant patients and can be used for either diagnostic or therapeutic purposes. At times, specific circumstances have the potential to transform a diagnostic procedure into a therapeutic one. The process of a D&C consists of two steps: initially, the cervix is dilated, followed by the curettage of the endometrial cavity. If hysteroscopy with directed endometrial sampling is not possible, a simple D&C can be done to obtain tissue for histologic evaluation, as advised for endometrial sampling in non-pregnant patients.<sup>1,2</sup>

There are two different types of curettes available: metal and plastic. A sharp metal curette is often utilized for conducting the diagnostic D&C procedure. Metal curettes have a long and flexible handle, with a teardrop-shaped opening at the tip. The curettes are available in various sizes, and their measurements are based on the largest diameter at the tip. Using a toothed curette can help in postmenopausal patients to

obtain a more comprehensive tissue sample of the endometrium.<sup>3,4</sup>

Plastic curettes or cannulas are commonly used in pregnant patients. There are various types of cannulas to choose from, such as straight or curved ones, as well as rigid or flexible options. Typically, a cannula between 7 mm and 12 mm is sufficient for a first-trimester abortion, as they are measured in millimeters. When the provider chooses a Pratt dilator, they will dilate slightly beyond the selected cannula size to make it easier to place the rigid plastic cannulas.<sup>1,5,6</sup>

Certain gynecologists use paracervical block (PCB) for uterine interventions. This method includes the administration of a local anaesthetic around the cervix to provide numbness to the surrounding nerves. Nevertheless, there is some doubt surrounding the efficacy of this approach. The available evidence seems to contradict each other when it comes to the effectiveness of PCB, and there is not much information available about its potential side effects. Further research is necessary to gain a better

understanding of PCB as a potential method for pain relief.<sup>7,8</sup>

Performing check curettage on a dilated cervix without anesthesia has been suggested as a potentially safe option with minimal negative effects on the patient. This could be especially helpful in situations where anesthesia is not available. In addition, the patient would also benefit from reduced procedure costs. You can take steps to avoid potential complications that can occur from anesthesia.<sup>9,10</sup>

If heavy bleeding is a concern, it is important to ensure proper asepsis is maintained during the procedure, even if it is performed outdoors. By ensuring prompt treatment and minimizing blood loss, this can greatly benefit the patient's well-being. Given the information provided earlier, the aim of this study was to examine and compare the level of pain felt during a paracervical block, both with and without anesthesia.

## MATERIAL AND METHODS

This study was conducted as a prospective randomized control trial in a medical college and associated hospital. The study lasted for duration of one year. The sampling was done using the convenience sampling method. The study participants were divided into two groups: a case group and a control group. The patients in the case group received the paracervical block, while the patients in the control group did not receive any anesthesia.

All adult patients admitted to the hospital with a first trimester incomplete and inevitable abortion and an open internal cervical os were included in the study, regardless of any associated high-risk factors. The study did not include individuals who had second trimester abortions or those with a closed internal cervical.

Inclusion criteria: If you're 18 years or older and don't have any medical conditions such as cardiac, renal, hypertension, or diabetes mellitus, and if your gestational age is less than 11 weeks based on the date of your last menstrual period or ultrasound (in cases of missed abortion, blighted ovum, or inevitable abortion)

Exclusion criteria: Certain criteria were used to exclude women who did not meet the specified requirements, had a gestational age exceeding 11 weeks, or had a medical condition or allergy to medications.

The study involved a total of 40 patients, evenly divided into two groups of 20 patients each. The patients were unaware of the group they would be assigned to. The patients in the control group were administered paracervical blocks at various positions around the cervicovaginal junction. Every point received a 10 ml injection of 1% lignocaine. In

another study group, 20 participants received the paracervical injection using 10 ml of normal saline at each point. Additional anesthetists were on standby to provide extra anesthesia if needed by patients. The curettage procedure started after waiting for 5 minutes for the block to become effective.

Throughout the procedure, close attention was paid to monitoring the pulse and blood pressure. In addition, we noted observations related to vocalization, limb movement, and any requests for increased anesthesia. The pain score for the entire procedure was documented using the numeric rating scale following the surgery. Patients who requested increased anesthesia were not included in the study, and their cases did not undergo examination for these specific parameters. Complications, duration of the procedure, and overall satisfaction were also noted. An analysis was conducted on the data collected from the two groups.

## RESULTS

The demographic characteristics of the studied groups were similar, and no significant differences ( $P > 0.05$ ) were observed. Group A had an average age of  $27.4 \pm 4.34$  years, while Group B had an average age of  $26.2 \pm 3.56$  years. Both groups had a median gestational age of 8.1 weeks. In group A, the mean gravidity was  $3.02 \pm 1.67$ , while in group B it was  $3.44 \pm 1.33$ . In group A, the BMI was  $25.56 \pm 1.17$  kg/m<sup>2</sup>, while in group B, it was  $25.52 \pm 1.16$  kg/m<sup>2</sup>.

In the control group, 2 out of 20 patients required a higher level of anesthesia, whereas in the study group, 6 out of 20 patients needed a higher level of anesthesia. There was no significant difference between the two groups in terms of their preference for increased anesthesia ( $p = 0.069$ ). In the control group, where higher anesthesia was not needed, the average procedure time was 13 minutes. On the other hand, the study group, which did not require higher anesthesia, had an average procedure time of 11.41 minutes. These findings show a resemblance, but they do not have enough statistical significance ( $p > 0.05$ ). No issues were found.

In Table 1, it was observed that the pain score in the study group was considerably higher compared to the control group. During the procedure, it was noted that there was a significant rise in heart rate in the study group following the administration of the paracervical injection. While performing the procedure to remove tissue from the uterus, there was a significant rise in the occurrence of rapid heart rate in the group being studied. The occurrence of tachycardia was comparable in both groups throughout the use of vulsellum, removal of curette, right after the procedure, and as a result of lithotomy.

**Table 1: Comparison between groups according to the demographic characteristics**

Sociodemographics Data	Group A (Control Group)	Group B (Case Group)
Age	27.4 ± 4.34 years	26.2 ± 3.56 years
BMI	25.56 ± 1.17 kg/m <sup>2</sup>	25.52 ± 1.16 kg/m <sup>2</sup>
Gravidity	3.02 ± 1.67	3.44 ± 1.33
Gestational Age	8.24 ± 0.62	8.12 ± 0.33

**Table 2: Pain scores in the two groups for patients not requiring higher anesthesia**

Pain scores	Group A (Control Group)	Group B (Case Group)
0	3	0
1	10	6
2	3	6
3	2	2

## DISCUSSION

PCB is a widely utilized technique globally for minor gynecological procedures. Administering lidocaine in the paracervical area is necessary to effectively numb the sensory nerves of the uterine cervix. PCB has a numbing effect that aids in minimizing discomfort during cervical manipulation. PCB is commonly used to provide pain relief during gynecological procedures that involve cervical dilation or manipulation. Common uses typically include procedures such as pregnancy termination, hysteroscopy, and cervical ablation or excision.<sup>11,12</sup>

Within the study group, there was a noticeable increase in pain scores. Nevertheless, the disparity in pain scores did not lead to a requirement for additional anesthesia in this particular group. During the study group, there was a significant rise in the occurrence of tachycardia during curettage. Once again, there was no significant rise in the requirement for increased anesthesia at this stage in either of the groups. Thus, it can be inferred that the elevated heart rate was mainly caused by the feeling of curetting rather than pain.

From the lower occurrence of tachycardia in the control group, it can be inferred that paracervical block with lignocaine effectively blocks sensations caused by intra-uterine manipulations to some extent. Additional investigation is required to draw any definitive conclusions about this phenomenon.

According to a study conducted by Renner et al, it was discovered that the group that received chlorprocaine experienced significantly less pain during curettage compared to those who received bacteriostatic saline.

## CONCLUSION

Overall, it can be concluded that the check curettage procedure for first trimester incomplete abortions with an open internal os can be safely performed without anesthesia, as it does not cause any significant pain. Although there was a difference in the overall pain scores between the two groups, it is important to mention that the average pain scores for both groups were relatively low, ranging from 1 to 2 on the pain scale.

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