

Effect of paracervical block in relief of first stage labour pain: an observational study

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Abstract

Childbirth is a painful as well as fruitful process which gives a woman pride of being a mother. However labour pains are among the most severe forms of pain and only the parturient knows the agony. Obstetric analgesia has evolved from vague possibility to reality during this century. Various techniques and drugs have been tried and tested. Present study describes the effect of Paracervical block in relief of first stage of labour pain. 100 cases of full term (37 to 42 weeks) singleton pregnancy with cephalic presentation in active phase of labour with cervical dilatation of ≥ 3 cm but ≤ 5 cm were included in the study. VAS was used to assess the pain before administering labour analgesia and repeated at 1 hour, 2 hour, 4 hour and at full dilatation of cervix. Overall effect of labour analgesia in relief of pain was categorized as : Excellent, Good, Fair and Poor. Duration of labour was recorded from time of administration of labour analgesia to delivery of baby. Mode of delivery was also noted and categorized as Normal, Assisted- Ventouse/Forceps or Caesarean. Assessment of neonatal outcome was done using APGAR score in all babies at 1 minute and 5 minute. Side effects or complications were also noted. Present study shows that labour pain as measured by VAS was relieved in an effective manner by Paracervical block technique of analgesia during labour. Around 80% subjects reported that overall effect of analgesia was good. Paracervical block can be used as an effective mode of labour analgesia.

Key Word: paracervical block, labour analgesia

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INTRODUCTION

The pain experienced in labour is affected by the processing of multiple physiological and psychosocial factors¹. Perceptions of labour pain intensity vary. Very occasionally women feel no pain in labour and give birth unexpectedly². At the other extreme labour pain has been reported to be the most severe pain that a woman experiences in her lifetime³. The simplicity and safety of paracervical block for the relief of the discomfort of the

first stage of labour has been noted by several authors and it has been used for decades^{4, 5}. A paracervical block is performed by infiltration of local anaesthetic in the cervix. It is injected into between two to six sites at a depth of 3 mm to 7 mm alongside the vaginal portion of the cervix in the vaginal fornices⁶. Present study describes the effect of Paracervical block in relief of first stage of labour pain with respect to visual analog scale (VAS), duration of labour, mode of delivery, and neonatal outcome.

METHODS

Study was carried over a period of two years at the Department of OBGY, Sassoon General Hospital, Pune. 100 cases of full term (37 to 42 weeks) singleton pregnancy with cephalic presentation in active phase of labour with cervical dilatation of ≥ 3 cm but ≤ 5 cm were included in the study. Subjects with any conditions like cephalopelvic disproportion, severe preeclampsia, eclampsia, intrauterine growth restriction, antepartum haemorrhage, multiple pregnancy, previous caesarean

delivery, diabetes mellitus, heart disease, severe anaemia, sensitivity to drugs or any major medical disorder were excluded from the study. Informed consent was taken from each of the participants as per guidelines. Age and detailed history of the participants was recorded. Physical and obstetric examination was done in detail. Before giving Paracervical block, lignocaine sensitivity was done. Under all aseptic precautions and as per protocol 2cc of 2% lignocaine was injected at 1,5, 7 and 10 o'clock position with needle directed towards the frakenhouser plexus with the help of index finger. Care was taken to avoid intrafetal or intravascular injection. VAS was used to assess the pain before administering labour analgesia and repeated at 1 hour, 2 hour, 4 hour and at full dilatation of cervix. Overall effect of labour analgesia in relief of pain was categorized as : Excellent: Patient completely relieved of pain. Good: Patient staying still and is aware of uterine contraction as well as experiences dull backache. Fair: Patient has experienced pain for significant part of labour. Poor: Patient disturbed and not relieved of pain. Duration of labour was recorded from time of administration of labour analgesia to delivery of baby and noted. Mode of delivery was also noted and categorized as Normal, Assisted-Ventouse/Forceps or Caesarean. Assessment of neonatal outcome was done using APGAR score in all babies at 1 minute and 5 minute. Side effects or complications were also noted.

RESULTS

Table 1: Age wise distribution of subjects in study group

Age (years)	Number of subjects
≤ 20	23
21-25	57
26-30	18
>30	2
Total	100

Table 2: Parity wise distribution of subjects

Parity	Number of subjects
Primigravida	51
Primipara	36
Multipara	13
Total	100

Table 3: Cervical dilatation wise distribution of cases

Cervical dilatation	Number of subjects
3	11
4	46
5	43
Total	100

Table 4: Visual Analog Score

Time (Hours)	Primigravida (Mean ± SD) (n= 51)	Multigravida (Mean ± SD) (n= 49)	Total (Mean ± SD) (n= 100)
0	7.99 ± 1.11	7.3 ± 1.1	7.65 ± 1.15
1	3.95 ± 1.59	3.95 ± 1.45	3.95 ± 1.52
2	6.08 ± 1.48	6.08 ± 1.54	6.08 ± 1.5
4	8.1 ± 0.95	7.85 ± 0.85	7.99 ± 0.89
Full Dilatation	8.4 ± 0.97	8.16 ± 0.87	8.28 ± 0.93

Table 5: Overall effect of analgesia in study subjects

Overall effect	Number of subjects
Excellent	12
Good	68
Fair	17
Poor	3
Total	100

Table 6: Duration of labour in study subjects

Cervical dilatation	Duration of labour (minutes) (Mean ± SD)
3	246.09 ± 47.28
4	200.26 ± 57.53
5	169.18 ± 63.93

Table 7: Mode of delivery in study subjects

Mode of delivery	Number of subjects
Normal Vaginal	96
LSCS	1
Forceps/ Ventouse	3

Table 8: APGAR score at 1 minute in study subjects

APGAR score	Number of subjects
0-5	0
6-7	64
8-10	36

Table 9: APGAR score at 5 minute in study subjects

APGAR score	Number of subjects
0-5	0
6-7	0
8-10	100

Table 10: Side effects in study subjects

APGAR score	Number of subjects
No	92
Accidental rupture of membranes	1
Bleeding at injection site	2
Fetal Bradycardia	2

DISCUSSION

Present study shows that labour pain as measured by VAS was relieved in an effective manner by Paracervical block technique of analgesia during labour. Around 80% subjects reported that overall effect of analgesia was good. The associated details have also been described in results section. Recently, a Cochrane review has also

reported that women who received local anaesthetic nerve block were more likely to be satisfied with pain relief compared with women who received placebo (RR 32.31, 95% CI 10.60 to 98.54, one study, 198 women)⁵. Zamani Mehrangiz *et al*⁷ also studied Paracervical block as labour analgesia and found that baseline score was 8 to 10 as per VAS which decreased to 0 to 2 after administration of Paracervical block. Mean duration of labour was found to be reduced in study subjects when compared with standard duration of labour. Similar results were reported by Deshpande *et al* in their study⁸. The APGAR score is not affected by paracervical block as shown by the study of Nagal *et al*⁹, Latha B¹⁰ study and present study. However, foetal bradycardia was noted in 2 patients in our study which was also reported by Latha B study¹⁰. To conclude, Paracervical block can be used as an effective mode of labour analgesia.

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