

PARACERVICAL BLOCK IN MANAGEMENT OF LABOUR

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SUMMARY

Paracervical block is helpful in relieving labour pains and in shortening the duration of labour in majority of primigravidae and multiparae.

The block does not affect the mode of delivery and condition of the mother and the fetus.

The paracervical block is simple to administer and does not require sophisticated fetal and maternal monitoring.

Introduction

Augmentation of labour is the desired goal of all modern obstetricians. Rupture of membranes, oxytocin and prostaglandins, all aim at reducing the duration of labour. The main purpose behind this augmentation is to reduce the suffering and pain that accompanies the active 1st stage. The 2nd stage pain cannot be much alleviated and as such, this stage is of short duration.

Pain relievers do take off pain considerably, but may not shorten labour. Epidural analgesia which is in vogue today and also effective in relieving pain however prolongs 2nd stage of labour. Besides, it requires an expert personnel to administer and monitor the mother and fetus.

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One regional analgesia which, besides relieving pain, claims to cut down the 1st stage of labour is paracervical block. Although Gelleet introduced paracervical block in 1922, its use was limited to few European countries until Freeman *et al* (1962) introduced this technique in the U.S.A.

Paracervical block is a technique of transcervical injection of a local anaesthetic agent into each of the lateral fornix. This blocks the sensory pathway from the upper portion of the uterus, lower uterine segment and the cervix. Besides, this block claims to soften and thereby dilate the cervix faster, thus shortening the duration of 1st stage of labour (Freeman *et al*, 1962; and Woelm, 1968).

Material and Methods

One hundred cases of uncomplicated pregnancies were selected for this study. A single paracervical injection was ad-

ministered when the cervix was 3-4 cm dilated and its effects compared with control cases. Twenty-five primigravidae and 25 multigravidae were taken as controls. Similarly, 50 (25 primigravidae and 25 multigravidae) uncomplicated pregnancies were selected for paracervical block using 1% Lignocaine, 10 ml on either side.

This study addressed the effect of paracervical block on pain relief, the intensity and duration of pain relief and duration of labour. Also the points noted were mode of delivery, the effects on mother, fetus and the newborn. The patients were matched for age which ranged between 18-26 years in primigravidae and 20-38 in multigravidae.

Observations

Pain relief was graded as excellent when the woman experienced complete relief, good when she felt dull backache, but needed no supplementary analgesia, fair when supplementary analgesia was needed and poor when paracervical block had no effect on labour pains.

Onset of pain relief

The onset of pain relief was observed within 5 minutes in 96% primigravidae as well as multigravidae. One primigravida failed to obtain relief (4%) and 1 multigravida took little over 5 minutes for pain relief.

TABLE I
Degree of Pain Relief

Degree of pain relief	Primi	Multi
Excellent	11	18
Good	10	4
Fair	3	3
Poor	1	0

Eightyfour per cent primigravidae and 88% multigravidae obtained excellent to good pain relief with xylocain block.

TABLE II
Duration of Pain Relief

Time in minutes	Primi	Multi
<60 minutes	0	1
61-90 minutes	8	11
91-120 minutes	10	5
121-150 minutes	6	6
>150 minutes	0	2
No relief	1	0

Average duration of pain relief lasted 1 hour 47 minutes in primigravidae and 1 hour 43 minutes in multigravidae.

TABLE III
Uterine Contractions

Change in uterine contractility	Primi	Multi
Same	24	19
Increased	9	5
Decreased	2	1

The uterine contractions decreased in 3 cases and labour was prolonged in 2 primigravidae and 1 multigravida. The labour hastened in 9 primigravidae and 5 multigravidae.

This Table reveals that paracervical block definitely shortens the duration of labour as compared with the control group both in primigravidae and multigravidae.

There was no appreciable change in mode of delivery in the two groups. There was no significant change in pulse and blood pressure in either groups.

Foetus and New born

Two primigravidae and 1 multigravida showed fetal tachycardia of more than

TABLE IV
Block—Delivery Interval

Time in minutes	Primi		Multi	
	Xylocaine	Control	Xylocaine	Control
70	1	0	1	1
71-130	4	1	9	4
131-190	12	4	6	7
191-250	4	13	3	8
251-310	2	3	3	4
>310	2	4	3	1
Total	25	25	25	25

TABLE V
Mode of Delivery

Mode of delivery	Xylocaine		Control	
	Primi	Multi	Primi	Multi
Spontaneous	20	23	19	22
Outlet forceps	2	1	1	0
Oxytocin enhancement	1	0	4	3
L.S.C.S.	2	1	1	0

160/minute soon following the block but this lasted only for 10 minutes. Transitional fetal bradycardia of less than 100/minute followed the block in 2 multigravidae, but the rate returned to normal in 20 minutes.

Apgar score over 7 was noted in 88% primigravidae and 96% multigravidae (control—96% and 100% respectively). One Rh -ve multigravida delivered an asphyxiated baby with forceps following failed ventouse for fetal distress, and the baby died 12 hours later. This death was not related to the paracervical block.

Maternal side effects—2 Primigravidae complained of drowsiness following the block while 3 primigravidae and 2 multigravidae developed transient bladder incontinence and diarrhoea.

Discussion

Epidural block cannot be employed in many institutions because of shortage of

anaesthetists, and fetal monitoring facilities. Paracervical block can be a substitute and any obstetrician can administer the block.

Ranney (1966) observed excellent relief in 90% of his cases. Only 1 primigravida failed to experience any pain relief in the present series while 84% primigravidae and 88% multigravidae observed satisfactory pain relief which lasted on an average 1¾ hours. Two multigravidae had pain relief over 150 minutes.

The uterine contractions were unaffected in 56% primigravidae and 76% multigravidae, increased in 36% primigravidae and 20% multiparae, whereas they were decreased in 8% primigravidae and multigravidae. Although Freeman *et al* (1966) reported increased uterine contractions with the block, the results have been variable.

The block—delivery interval was

shortened and labour accelerated by an average of 1 hour 15 minutes in primigravidae and 1 hour in multiparae. Freeman *et al* (1966) reported similar findings. Woelm (1968) too observed acceleration of labour in his series. The labour was slowed in 2 primigravide on account of diminished uterine contractions following the block.

There was no appreciable change in mode of delivery, and general condition of the women. Although transient fluctuations were noted in fetal heart rate, that did not alter the mode of delivery and the fetal outcome.

Dolff *et al* (1970) observed parametritis, numbness and paresis and incontinence of bladder and rectum following the block. Apart from transient bladder incontinence and diarrhoea, no other side effects were noted in the present series.

References

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