

## PARACERVICAL MARCAINE BLOCK IN LABOUR

by

SANDYA BAJPAI

and

V. PADUBIDRI

### SUMMARY

Failure rate of 30% with marcaine block is rather distressing. The pain-relieving effect of the block was however satisfactorily prolonged in most cases.

Marcaine paracervical block is a good regional analgesia in our country, as it does not demand sophisticated monitoring. It is simple to administer.

### Introduction

A need for alleviating the pains and shortening the duration of 1st stage of labour has long been realised. Epidural analgesia while fulfilling part of these requirements demand the presence of an anaesthetist and fetal monitoring which may not be met with in majority of the institutions in our country. An alternative procedure that has been revived in this field is paracervical block.

A study was undertaken to assess the value of the paracervical block using long acting drug, marcaine.

### Material and Methods

One hundred cases of uncomplicated pregnancies were selected. A single paracervical block with 1% marcaine (10 ml on either side) was administered when the cervix was 3-4 cm dilated and

its effects were compared with control cases. Twenty-five primigravidae and 25 multigravidae were selected as controls. Similarly, 50 cases (25 primigravidae and 25 multigravidae) were chosen for the block.

The study monitored the effect of the block on pain relief, intensity and duration of relief and effect on labour, mother and fetus.

### Observations

*Onset of pain relief:* Pain relief was obtained within 5 minutes in 76% primigravidae and 64% multigravidae. Six primigravidae and 9 multigravidae failed to get relief.

TABLE I  
*Intensity of Pain Relief*

Degree of pain relief	Primi	Multi
Excellent	6	5
Good	3	4
Fair	10	7
Poor	4	9

*From: Ram Manohar Lohia Hospital, Lady Hardinge Medical College & Smt. S. K. Hospital, New Delhi-*

*Accepted for publication on 8-6-85.*

Pain relief was excellent to good in 36% both in primigravidae and multigravidae.

Average duration of pain relief was 131 minutes in primigravidae and 99.6 minutes in multigravidae. Minimum duration of pain relief was 45 minutes in both the groups and maximum 240 minutes in primigravidae and 230 minutes in multigravidae. The median duration of relief in primigravidae was 115 minutes and in multigravidae it was 90 minutes.

TABLE II  
Duration of Pain Relief

Time in Minutes	Primi	Multi
<60 minutes	6	4
61-90	2	2
91-120	3	4
121-150	0	4
151-180	1	1
181-210	3	0
>210	4	1
No relief	6	9

TABLE III  
Change in Uterine Contractility

Uterine contractility	Primi	Multi
Same	12	8
Increased	11	15
Decreased	2	2

Fiftytwo per cent primigravidae had block—delivery interval < 190 minutes (control 20%), whereas in multigravidae 88% had block delivery interval < 190 minutes (Control 48%).

Of the 9 cases of primigravidae who experienced prolonged labour of more than 4 hours block—delivery interval, 6 failed to appreciate any pain relief and another 2 had decreased uterine contractions. Amongst multigravidae, only 2 who experienced decreased uterine contractions following the block had prolonged labour.

TABLE IV  
Block—Delivery Interval

Time Interval in minutes	primigravidae		Multigravidae	
	Block	Control	Block	Control
<70	2	0	1	1
71-130	4	1	9	4
131-190	7	4	12	7
191-250	3	13	1	8
251-310	3	3	0	4
311-410	3	2	0	1
411-510	0	2	0	0
>510	3	0	2	0
Total	25	25	25	25

TABLE V  
Mode of Delivery

Mode of Delivery	Primigravidae		Multigravidae	
	Control	Block	Control	Block
Spontaneous delivery	19	20	22	21
Outlet forceps	1	1	0	2
Syntocinon drip	4	2	3	1
L.S.C.S.	1	2	0	1

Apart from the fact that 28% of control group required augmentation with syntocinon drip as compared with 12% in the paracervical block group, there was no difference in the mode of delivery in either group.

TABLE VI  
Fetal Heart Rate

Change in FHR	Primis	Multi
No change	13	15
Bradycardia	12	10
Tachycardia	0	0

Of 12 cases of fetal bradycardia in primigravidae, 5 had a drop of more than 10 beats/minute, but fetal heart rates were still within the normal limits. Seven primigravidae developed bradycardia of < 120/minute but > 100/minute which lasted for 10-15 minutes in all except one patient in whom bradycardia persisted for as long as 40 minutes and the baby was asphyxiated at birth but survived. Of the 10 cases of bradycardia amongst multigravidae, 5 had FHR within the normal limits, and 5 demonstrated a drop below 120/minutes. In 3 of these, FHR picked up after 10-15 minutes.

**Apgar score:** Only one primigravidae who developed bradycardia for 40 minutes, delivered an asphyxiated baby with score of 6/10 at the end of one minute (forceps delivery), but survived following resuscitation. All other babies in this series had normal Apgar score.

**Maternal side effects:** General condition of all cases remained stable. Two primigravidae felt drowsy and complained of tingling in the lower extremities. 2 multigravidae complained of nausea and dizziness and one felt transient numbness in the lower limbs.

#### Discussion

Marcaine is a long acting analgesic and is expected to give good analgesia in labour. The present study however reveals that 6 primigravidae (24%) and 9 multigravidae (36%) failed to experience any pain relief. Weinschutz and Wanger (1970) observed excellent relief in 85.2% of their cases with low failure rate of 11.5%. Westholm *et al* (1970) and Teramo (1969) obtained successful block in 80% cases.

Marcaine provides comparatively longer period of pain relief both in primigravidae as well as in multigravidae as shown in Table II, and our observations tallied with those of Westholm *et al* (1970).

Table III shows that marcaine block either maintained or augmented uterine contractions in 92% primigravidae and 92% multigravidae. Whereas Wolm observed no change in uterine contractility, Herman and Stadler (1970) reported decrease in uterine contractions and Stockhausen (1970) increased contractions. Labour was prolonged for < 15 hours in primigravidae and 16 hours in multiparae whenever uterine contractions were diminished.

Marcaine block did not alter the mode of delivery, though augmentation with syntocinon was less frequent with the block than in control group. Herman and Stadler (1970) similarly observed augmented labour and faster cervical dilatation with marcaine block.

Bradycardia was not of any therapeutic significance when it lasted for 10-15 minutes. Prolonged bradycardia does alter the neonatal outcome. Teramo (1969) reported bradycardia in 30% of cases, but tachycardia did not occur as is also reported in the present

series. Maternal side effects were few and far between and were not of any serious nature.

References

1. Herman, K. and Stasler, G.: Geburtshilfe Frauenheilkd. 30: 409, 1970.

2. Stockhausen, H.: Int. J. Gynecol. and Obstet. 8: 751, 1970.
3. Teramo, K.: Acta. Obstet. Gynec. Scand. 48: 80, 1969.
4. Weinschutz, M. and Wagner, H. J.: Am. J. Obstet. Gynec. 113: 988, 1972.
5. Westholm, H., Magono, R. and Asonberg, A.: Acta. Anaesthol. Scand. 37: 276, 1970.