A COMPARATIVE STUDY OF LIGNOCAINE AND MARCAINE PARACERVICAL BLOCK IN AUGMENTATION OF LABOR

By

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Introduction

A need to alleviate the labour pains and shorten the duration of 1st stage of labour has long been realised and put into use in modern obstetric practice. Rupture of membrane, oxytocin and prostaglandins reduce the duration of labour, whereas pain relievers and epidural analgesia take off pain, but neither combine the effect of both. Epidural analgesia in vogue in advanced countries demand the presence of an anaesthetist, and expertise to monitor the mother as well as the fetus, a situation not yet forthcoming in majority of hospitals in our country.

One regional analgesia which besides relieving pain, claims to cut down the 1st stage of labour is paracervical block. Although Gellert introduced this technique in 1922, it relunctantly paved its way into obstetrics gaining favourable results from some, and getting discarded by others.

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 the cervix and hasten its dilatation (Freeman 1962; Seley and Gold, 1966).

A study was undertaken to realise the value of paracervical block and compare its effects using 1% Lignocaine and 1% marcaine.

Material

One hundred and fifty cases of uncomplicated pregnancies were selected. A single paracervical block (10 ml on either side) was administered when the cervix was 3-4 cm dilated and its effects compared with control cases. Twenty-five primigravidas and 25 multiparas were chosen as controls. Similarly, 50 cases (25 primis and 25 multis) each was selected for Lignocaine and marcaine block. The 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 the mother, fetus and the newborn. The patients were matched for age, which ranged between 18-26 years in primigravidas, and 20-38 in multigravidas. The two drugs were compared in their effect on relief of pain and duration of labour.

Whereas only one primigravida failed to obtain relief with lignocaine, 6 primis and 9 multigravidas failed to enjoy the relief with marcaine.

Pain relief was graded as excellent when a woman experienced complete relief, good when she felt dull backache, but needed no supplementary analgesia.

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Accepted for publication on 10-7-86.

The relief was described as fair when supplementary analgesia was required and poor response when the block had no effect on labour pains.

A better pain relief was noted in lignocaine group both in primis and multis as compared to marcaine block. More failure was seen with marcaine block (30% in marcaine group compared to only 2% in lignocaine group).

An average duration of pain relief with lignocaine block lasted 1 hour 47 minutes in a primigravida and 1 hour 43 minutes in a multigravida. With marcaine block, the average duration of pain relief was 2 hours 11 minutes in a primi and 1 hour 40 minutes in a multigravida. Besides, as many as 8 women experienced relief of pain for over 3 hours with marcaine block as compared to none with lignocaine block.

TABLE I
Onset of Pain Relief

Time in minutes	Lignocaine		Marcaine	
	Primi	Multi	Primi	Multi
<5 minutes	24	24	19	16
>5 minutes	0	1	—	—
Failed	1	0	6	9

TABLE II
Intensity of Pain Relief

Degree of pain relief	Lignocaine		Marcaine	
	Prim.	Multi	Prim.	Multi
Excellent	11	18	6	5
Good	10	4	3	4
Fair	3	3	10	7
Poor	1	0	6	9

TABLE III
Duration of Pain Relief

Time in minutes	Lignocaine		Marcaine	
	Primi	Multi	Primi	Multi
<60	0	1	6	4
61 - 90	8	11	2	2
91 -120	10	5	3	4
121-150	6	6	0	4
151-180	0	2	1	1
181-210	0	0	3	0
>210	0	0	4	1
No relief	1	0	6	9

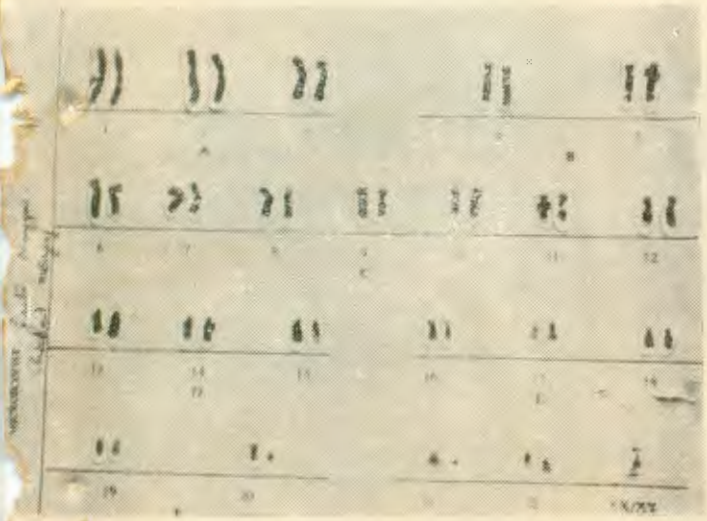

Fig. 1
Shows Karyo type of the patient.

Fig. 2
Shows patient with Turner's syndrome

Fetal Hydrocephalus Early Ultrasound Diagnosis—Madhuchandra and Kusuma Kumari pp. 338-340

Fig. 1
BPD 6 cm. Both Lateral Ventricles dilated
Gestational age 22 weeks.

Fig. 2
BPD 8.4 cm. Both Lateral Ventricles dilated
Gestational age 28 weeks.

Fig. 1
Low implantation.

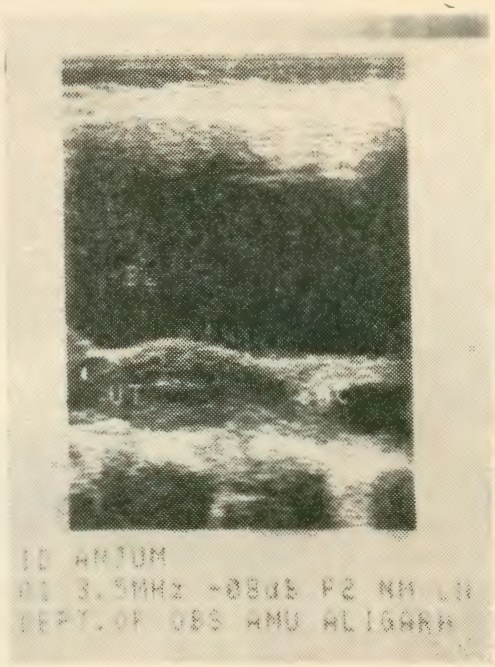

Fig. 2
Inevitable abortion gestation sac seen in the Vagina.

Fig. 3
Missed abortion early—sac is regular but no fetal heart visualised.

Fig. 4
Incomplete abortion.

Ultrasound Evaluation of First Trimester Bleeding—Malhotra et al pp. 341-343

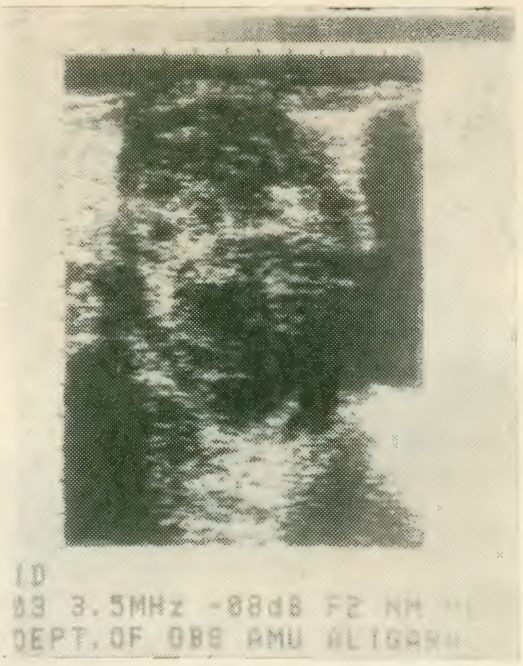

Fig. 5. Vesicular mole.

Fig. 6. Ultrasound picture of ectopic sac with live pregnancy with decidual reaction in uterus.

Ultrasonography—A Diagnostic Tool—Malhotra et al pp. 348-349

Fig. 1. U.S.G. Picture of anencephaly.

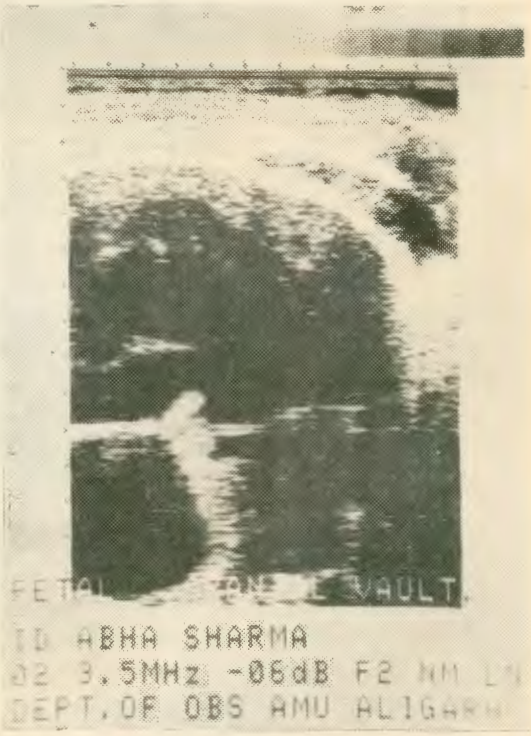

Fig. 2. U.S.G. Picture of hydrocephalous.