

IMPACT OF CERVICOGRAM IN A RURAL POPULATION

By

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SUMMARY

Value of cervicogram in labour was assessed by constructing a normogram and alert line with 60 primigravidae. A further 90 primigravidae were analysed in comparison to the normogram regarding the type of delivery, rate of cervical dilatation, method of acceleration and incidence of foetal distress and action line was drawn.

The normogram was constructed at a rate of 1.25 cm/hour. Those cervicograms which crossed the normogram and were between alert and action line had cervical dilatation at a rate of 0.9 cm/hour. Those crossing action line was 0.7 cm/hour. Similarly incidence of foetal distress was higher when cervical dilatation crossed action line, which was 23% compared to 5.3% when cervicogram was to the left of alert line.

Introduction

Rural population of obstetric patients needs a special monitoring and that can be done with cervicogram maintenance for early identification of dystocic labour. Kasturba Medical College at Manipal is situated at a rural area giving obstetric care to the community. It is only humane to prevent unduly prolonged labour and this can be done by a cervicogram. The cervicogram is a simple clinical record which apart from detecting dystocia early, improves the clarity of the entire recording of intrapartum observations.

Aim of the Study

1. To construct a Normogram of cervical dilatation for primigravidae.

2. To construct alert line and action line.

3. To evaluate the value of cervicogram in relation to Alert and Action Line.

Material and Methods

This study was undertaken at Kasturba Medical College, Manipal, India, which is situated in a rural area. A normal cervicogram was constructed by studying 60 primigravidae who had no complications of pregnancy or labour (Group I). None of these cases had acceleration of labour. Alert line was constructed by 10% of the slowest dilators from the Normogram.

A further 90 cases without complications of pregnancy or labour were analysed. Their cervicograms were studied.

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in comparison to the Normogram (Group II).

Results and Discussion

The average rate of dilatation in Group I was charted as Normogram and this was at a rate of 1.25 cm/hour taking 7 hours 44 minutes in active phase. The active phase has been reported to be 7 hours 50 minutes (Daftary and Mhatre, 1977), 6.11 hours \pm 3.9 hours (Daftary and Mhatre, 1977) 8.7 hours (Schulman and Ledger, 1964) by various authors. A rate of 0.9 cm/hour was taken for constructing an 'Alert Line' which was the dilatation rate in 10% of the Group I who were slowest in dilating. Other workers have found 1 cm/hour (Philpote and Castle, 1972) 0.8 cm/hour (Pierre and Nasah, 1964) for 'Alert Line'.

Of the 90 cases in Group II, there were 12 cases of acute fetal distress and on analysis of these cases, 9 of the 12 had their cervicographs 2 to 4 hours to the right of Normogram and had low Apgar scoring at birth. Hence 'Action Line' was drawn 2 hours to the right of 'Alert Line'. Others have constructed 'Action Line' 3 hours to right (Pierre and Nasah, 1964) and 2 hours (Daftary and Mhatre, 1977). Thus these 90 cases of Group II

were further subdivided into IIa, IIb and IIc.

Group IIa (N=38) = those with Cervicograms to the left of Alert Line.

Group IIb (N=13) = Those with Cervicographs between Alert and Action Line.

Group IIc (N=39) = Those with Cervicographs to the right of Action Line.

Type of Delivery

In Groups IIa, IIb and IIc, there were 35 (82.1%), 3 (23%) and 2 (5.1%), who had normal delivery whereas it was 3 (7.9%), 10 (77%) and 31 (79.4%) for instrumental delivery and in IIc, there were 6 (15.5%) who had caesarean section as shown in Table I. Thus operative deliveries were higher when cervicographs were to be right of Alert Line. Thus slower rates of cervical dilatation showed higher operative interference as also shown in other Studies (Philpott and Castle, 1972).

Methods of acceleration was higher in those with cervicographs who crossed the Alert Line and much more on crossing action line those seen in studies (Studd, 1973; William and William, 1972; Daftary

TABLE I
Type of Delivery

Delivery	IIa N = 38	IIb N = 13	IIc N = 39	Total
Normal	35 (92.1%)	3 (23%)	2 (5.1%)	40
Forceps	3 (7.9%)	10 (77%)	31 (79.4%)	44
C. S.	—	—	6 (15.5%)	6
Total	38	13	39	90

and Mhatre, 1977) In the present series, the Groups IIa, IIb and IIc had 2 (5.9%), 6 (14.7%) and 26 (70.4%) and ARM was done in 0, 2 (25%) and 6 (75%) and no acceleration was required in 36 (75%), 5 (10%) and 7 (15%) of cases (as shown in Table II).

The rate of cervical dilatation was slower in Group IIb and IIc. It was in the range of 0.7 cm to 0.8 cm/hour as shown in Table IV. Other workers had in the same group a rate of 1.4 cm and 0.8 cm/hour (Daftary and Mhatre, 1977), 0.44 cm/hour (Philpott and Castle, 1972).

TABLE II
Method of Acceleration

Method	IIa N = 38	IIb N = 13	IIc N = 39	Total
Pitocin	2 (5.9%)	6 (14.7%)	26 (79.4%)	34
A.R.M.	—	2 (25%)	6 (75%)	8
No acceleration	36 (75%)	5 (10%)	7 (15%)	48
Total	38	13	39	90

The fetal distress was seen in 2, 1 and 9 (5.3%, 7.6% and 23%) in IIa, IIb and IIc respectively, thus showing higher incidence in Group II as shown in Table III.

TABLE III
Fetal Distress

	IIa N = 38	IIb N = 13	IIc N = 39
No.	2	1	9
Percentage	5.3%	7.6%	23%

Conclusion

Rural population have to be monitored extra carefully due to their lower educational status and not having proper obstetrical care in a developing country. Early identification of dystocic labour may be done even by a midwife and refer the case to a major institution for proper management thereby reducing the obstetrical and fetal outcome.

TABLE IV
Rate of Cervical Dilatation
(In cm/hour)

Type of	Group I	Group II		
		IIa N = 38	IIb N = 13	IIc N = 39
Normal	1.25	1.2 (35)	0.9 (3)	0.7 (2)
Forceps	—	1.1 (3)	0.8 (10)	0.7 (37)
Caesarean section	—	—	—	0.7 (6)

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