

PARTOGRAMS IN CASES OF PREVIOUS CAESAREAN SECTIONS

by

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Friedman in 1954, developed a cervical dilatation time curve that makes it possible to follow labour critically as it progresses. But revived interest in partograms particularly in relation to cervicographs was aroused by Hendricks (1970), Philpott and Castle (1972), Studd (1973) and Melmed and Evans (1976). Maintenance of cervicographs during labour is of great help in the management of problematic cases. Partograms are very useful in the early identification of slowly progressing and dystocic labour. We all are aware that a patient with previous caesarean section in labour often taxes the obstetrician's judgement for continuation of labour or repeat C.S. Practising obstetricians learn through experience to recognise the early signs of abnormal labour. But the shortage of obstetricians demand new and better ways to develop the art of obstetrics which should be safe and easy so that it can be taught to medical students, interns and paramedical personnel in the management of these cases even in rural areas. We hence thought of studying the use of parto-

grams in these cases of previous lower segment caesarean section who were allowed to proceed in labour.

Material and Method

The present collection is a retrospective study of partograms, mainly in relation to cervicographs in 74 cases of previous lower segment caesarean section (LSCS) who were allowed to proceed in labour with a hope of normal vaginal delivery during 1976 and 1977 at L.T.M.G. Hospital, Bombay.

The progress of cervical dilatation was studied once the labour was well established and this time was taken as zero hours. All the cases at zero hour had cervical dilatation of atleast 2 cms. This was plotted on a graph paper along with Alert line and Action lines using Philpott's criterias, i.e. Alert line starts at 1 cm dilatation at zero hrs and progresses at 1 cm/hr to full dilatation at 9 hours while action line was drawn parallel and 4 hrs to the right of Alert line.

The progress of cervical dilatation was studied by frequent vaginal examinations. The Initial dilatation rate (I.D.R.) was calculated on the basis of increase in the rate of cervical dilatation at the next vaginal examination.

The average dilatation rate (A.D.R.) was calculated on the basis of further re-

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peated vaginal examination and the time taken for achieving that dilatation. This study went on either upto full dilatation of cervix, or till the patient was taken up for LSCS.

The vaginal examination was repeated at random frequency either, because, it was required, or for seniors opinion and no definite schedule of repeat vaginal examination was strictly followed. Throughout labour all these patients were observed for uterine contractions, descent of the presenting part, maternal and foetal condition and progress of labour.

In our series 46 cases delivered vaginally with or without assistance in the form of vacuum or forceps, while 28 cases (38%) needed repeat caesarean section.

Table I shows the indications for present caesarean section, 43% of the cases needed a repeat caesarean section for inco-ordinate uterine activity and about the same percentage of the cases needed repeat caesarean section for border-line cephalopelvic disproportion. In 75% of the cases of inco-ordinated uterine acti-

TABLE I
Indications

Indications	No. of cases
Inco-ordinate uterine action	12 (43%)
(a) Cervical dystocia	3
(b) Foetal distress	4
(c) Prolonged labour	4
(d) Uterine inertia	1
C.P.D.	12 (43%)
Malpresentations	2
Precious baby	1
Placenta praevia	1
Total	28

vity needing C.S., the A.D.R. was less than 0.2 cm/hr.

Table II shows the co-relation between A.D.R. and indication for previous C.S. and outcome in present labour. In cases of previous caesarean section done for inco-ordinate uterine activity, malpresentation and cephalopelvic disproportion, 50 per cent, 31 per cent and 33 per cent respectively required repeat caesarean section, and in all of them the A.D.R.

TABLE II
Co-relation Between A.D.R., Outcome in Present Labour and Indication for Previous C.S.

Previous C.S. Indications	Average Dilution rate in Cms/Hr.							
	Less than .4		.5 to .9		1 to 1.4		1.5 and more	
	Vag.	C.S.	Vag.	C.S.	Vag.	C.S.	Vag.	C.S.
Inco-ordinate Uterine action (N = 16)	—	8 (50%)	3	—	4	—	1	—
Malpresentation (N = 16)	—	5 (31%)	7	—	3	—	1	—
C.P.D. (N = 30)	1	10 (33%)	5	1	9	—	4	—
Placenta Praevia	—	2	—	—	1	—	—	—
Eclampsia	—	1	1	—	—	—	—	—
Miscl.	2	1	2	—	2	—	—	—

was less than 0.4 cm/hr, whereas all other cases except one with A.D.R. more than 0.5 cm/hr delivered vaginally.

Table III shows the outcome of labour in relation to initial dilatation rate

with vertex presentations and head floating. Out of 43 cases, 22 (51%) underwent caesarean section, thus having almost equal chances of vaginal delivery. Out of these 22 cases, 21 had A.D.R. of

TABLE III
Outcome of Labour in Relation with I.D.R.

Initial Dilatation Rate	C.S.	Vacuum	Forceps	Vag. delivery	
Less than .4 cms/hr. (N = 34)	19	1	—	14 (41%)	
.5 to .9 cm./hr. (N = 24)	8 (34%)	—	—	16 (66%)	
1 cm. to 1.4 cm./hr. (n = 11)	1	—	1	9	
1.5 to 1.9 cm./hr. (N = 4)	—	—	—	4	
2 cms./hr or more	—	—	—	1	
Total	28	+1	+1	+44	=74

(I.D.R.). It was observed that when I.D.R. was less than 0.4 cm/hr., 59% of the cases needed some interference in the form of either caesarean section or vacuum, while only 41% of them delivered normally per vaginam. When I.D.R. was more than 1 cm/hr., out of 16 patients, only 1 patient underwent caesarean section while the rest (94%) delivered vaginally, thus suggesting the importance of I.D.R. in predicting the outcome of labour.

Table IV shows the outcome of labour in relation with A.D.R. in cases in labour

less than 0.4 cm/hr. Similarly, of patients who delivered vaginally, majority had A.D.R. between 0.5 cm/hr. to 1.4 cm/hr.

Table V shows the outcome of labour in relation with A.D.R. in 28 cases in labour with head engaged. Out of these 28 cases, only 4 (14%) needed caesarean section, and they all had A.D.R. less than 0.4 cm/hr.

Summarising, out of 30 cases with A.D.R. less than 0.4 cm/hr. 90% required caesarean section, while in cases with A.D.R. between 0.5 to 1.4 cm/hr about 97% of them delivered vaginally.

TABLE IV
Outcome of Labour in Relation to A.D.R. in Head Floating Cases (Total 43)

Mode of delivery	Average Dilatation Rate in Cms/hr.			
	Less than 0.4	0.5 to .9	1.0 to 1.4	1.5 & more
Caesarean Section (N = 22)	21	1	—	—
Vacuum	1	—	—	—
Forceps	—	—	—	—
Vaginal delivery (N = 20)	1	9	7	3

TABLE V
Outcome of Labour in Relation to A.D.R. in Head Engaged Cases (Total 28)

Mode of delivery	Average Dilatation Rate in cms/hr.			
	Less than 0.4	0.5 to .9	1.0 to 1.4	1.5 & More
Caesarean Section	4 (14%)	—	—	—
Vacuum	—	—	—	—
Forceps	—	1	—	—
Vaginal delivery	1	8	11	3

Fig. 1 shows the cervicographs of some

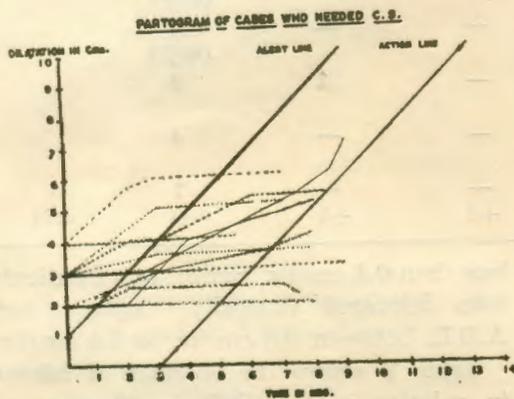


Fig. 1

of the cases who needed caesarean section. It is seen from the graphs that almost all of them had crossed the Alert line and many of them had even crossed the Action line. Fig. 2 shows the cervico-

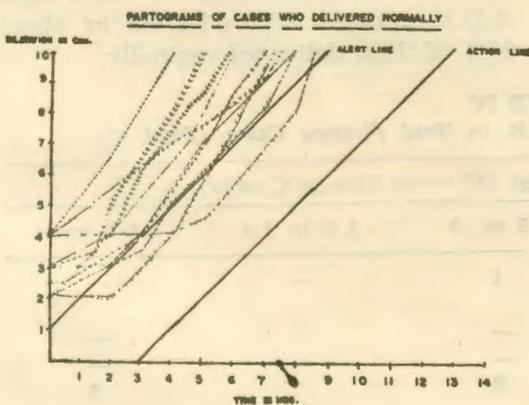


Fig. 2

graph of the cases who delivered vaginally. This shows that most of them were on left side of the Alert line, and those who had crossed it also returned towards left.

Discussion

Studd (1973) found normograms useful in differentiating normal from abnormal labour by retrospective evaluation of normograms of primigravida in labour. Philpott and Castle (1972) consider cervicographs as the central feature of partograms. His alert line alerts the obstetrician for timely care of the patient such as transfer to the other well equipped hospital or starting a pitocin drip etc. When the cervicograph crosses the action line usually active management is required. According to Ledger (1972) the abnormal cervical dilatation pattern does not dictate therapy but indicates the need for clinical evaluation and possible intervention. In Philpott and Castle's study (1972) 22% of his patients crossed the alert line and half of these ultimately required C.S. Sixty-eight of his cases crossed the action line but following the active management only 20% of them required caesarean section and rest delivered vaginally.

Instead of calculating O.D.R. by Melmed and Evan's (1976) criteria, we have calculated A.D.R. because, many of

our patients did not reach full cervical dilatation. They studied the initial dilatation rate in active phase of labour and found, it as accurate indicator of the outcome of labour. In their series 93% with I.D.R. of 1 cm/hr. delivered spontaneously, while in our series 94% with I.D.R. more than 1 cm/hr. delivered spontaneously.

Daftari and Mahtre (1977) found that the mean rate of cervical dilatation was 2 cm/hr, in patients whose cervicographs fall on the left side of the alert line, while it was 1.4 cm/hr. between alert line and action line.

Summary

(i) Seventy four cases of previous caesarean section who were allowed to proceed further in labour were analysed for partogram data, giving more importance on cervicographs.

(ii) I.D.R. & A.D.R. were found to be useful indicators for differentiating cases requiring interference.

(iii) 75% of cases with IDR 0.5 cms/hr. or more and 98% of cases with

A.D.R. 0.5 cms./hr. or more delivered vaginally and 94% of patients with I.D.R. more than 1 cm. delivered vaginally.

(iv) Fifty nine per cent of patients with I.D.R. less than 0.4 cms/hr. and 90% of patients with A.D.R. 0.4 cms./hr. or less required repeat caesarean section.

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