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Clinical profile of primi para pregnant ladies

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Abstract

Cervical dilatation is seen to progress faster after the rupture of the fetal membranes in multiparas than in nulliparous. Similarly maternal age seemed to have no influence on the pattern, except for slight retardation in older multiparas. The curve was the same whether or not bony disproportion existed and the time of amniotomy also did not appear to alter it. The course of the average normal curve, with its accelerated bend at 3-4 centimeters dilatation expressed as straight line before and after this point in time, was thought to be due to a change in consistency of cervical tissue as labour progressed. The present study consists of 200 primiparas with full term pregnancy in a spontaneous labour with cephalic presentation in Government General Hospital. Out of 27 of those admitted in latent phase, 17 (62.96%) patients delivered spontaneously, 6 (22.22%) required forceps delivery for various indications and 4 (14.81%) patients required caesarean section for various indications. Out of 73 of those admitted in active phase 46 (63.01%) delivered spontaneously, 10 (13.69%) required forceps for various indications and 17 (23.28%) required caesarean section, for various indications.

Keywords: Primiparas, pregnancy, amniotomy

Introduction

The literature dealing with clinical evaluation and management of individual labour is extensive. Most reports are concerned with the influence of certain procedures and medications upon it. It was Calkins and co-workers who presented a growing mass of objective data bearing on variations in the length of the stages of labour. Calkins was convinced that the resistance of the cervix and pelvic floor together with effectiveness of the uterine contractions will ultimately determine the total duration of labour. He stated that considering these factors along with parity one can predict, the duration of labour and thus much interference which are usually prematurely celled upon, can be avoided. His work culminated in a report detailing the factors relevant to predict the length of first stage of labour [1].

Unfortunately Calkin's scheme never enjoyed good acceptance. Though it apparently looks to be an objective phenomenon it requires uniformity in the subjective impression of the findings e.g., the same cervix may appear firm to one end other may label it medium.

This work of Calkins gave an idea that majority of the terms and statements which are used during the management of labour should have some sound foundation, so that they can be determined objectively. Naturally objective statements will be more precise, informative, accurate and uniform as compared to their subjective counterparts. Like the statement that 2/5th head palpable per abdomen has the obvious difference from the terms like engaged, fixed and a ballot able head [2].

The Wehenzahlen (pain count) technique was developed by Frey in 1929. He felt that labour would not evolve without predetermined number of sufficiently strong contractions and that this number was more important than the time factor involved. His graphic approach consisted of half hourly notations of the accumulated number, average duration and character of the contractions, as well as the fetal heart rate and presentation, cervical effacement and dilatation, and the gross degree of engagement. It was found that nulliparas seldom (6.5%) required more than 300 contractions and multiparas rarely (0.8%) more than 200 after the rupture of the fetal membranes. But this also could not be widely accepted [3].

In 1930 for the first time Wolf stressed on the necessity for the exact and timely registration of the progress of cervical dilatation. Previously, only total labour time or the total time since rupture of the membranes was of interest. Wolf first portrayed his concept of; fractional cervical dilatation time, a graphic manner illustrating the dynamic aspects of labour phenomenon. It was represented diagrammatically in a retrospective fashion with cervical dilatation plotted against the number of hours prior to delivery. His sole published material was related to rupture of membranes and its effect on labour [4].

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In 1948, Koller described a graphic representation of the course of labour that was said to facilitate the practical control of the entire process and thus yield a valuable service for the scientific study of a great number of observations of labour. His Partogram consisted of a coordinate record with zero time representing the point at which membranes ruptured. Cervical dilatation was represented on an irregular scale, the divisions of which were namely, diameters of a 1-2 franc coin, a 5 franc coin, a small palm, a palm, complete dilatation and then the delivery of the baby and of the placenta. Koller demonstrated that the dispersion of the curve before and after the rupture of the membranes was different i.e., less steeply inclined prior to amniotomy and more rapid following it. He concluded that the effect seen was the result of the event and that amniotomy influences the duration of labour. Since the length of labour was deemed to affect maternal and fetal prognosis, it was felt to be valuable in the sense that it allowed one to try to maintain the duration within what was considered favorable limits. This partogram was used extensively in the obstetrical units at Basic with apparent success and usefulness [5].

Simultaneously and apparently independently in 1950 Zimmer presented studies using a course time graph; a modification of Wolf's foregoing work. He showed by his extensive studies on a large number of patients that the cervical dilatation is seen to progress faster after the rupture of the fetal membranes in multiparas than in nulliparous. Similarly maternal age seemed to have no influence on the pattern, except for slight retardation in older multiparas. The curve was the same whether or not bony disproportion existed and the time of amniotomy also did not appear to alter it. The course of the average normal curve, with its accelerated bend at 3-4 centimeters dilatation expressed as straight line before and after this point in time, was thought to be due to a change in consistency of cervical tissue as labour progressed [3].

Koller and Abt found that at the onset of the uterine contractions, the curve is horizontal along the upper border of the graph, then it falls to an inverted manner progressively, according to the degree of dilatation. Greater the inclination faster is the labour and lesser the inclination slower is the labour and it is perfectly horizontal in arrested labour.

Methodology

The present study consists of 200 primiparas with full term pregnancy in a spontaneous labour with cephalic presentation in Government General Hospital.

The 200 cases contains study group of 100 primiparas and 'control group of 100 primiparas with no medical or obstetrical complication in either group. The 100 cases of study group were managed by partogram shown on the left side during a period from January 1984 to February 1985. Cases were selected randomly. Labour pattern of all cases was studied.

Presentation, position, engagement of presenting part and fetal heart rate were recorded on a graph paper. Blood pressure and pulse were also recorded on the same graph at an appropriate place.

Vaginal examination was carried out under all possible aseptic precautions, special note was taken of cervical dilatation. This cervical dilatation was charted at zero hour. The cases with cervical dilatation 7 cms or more were not taken for study.

Abdominal delivery was decided upon for all cases of foetal distress during first stage of labour and forceps was applied during second stage, if all the criteria for outlet forceps were fulfilled.

In study group maximum period allowed for second stage was 30 minutes with good uterine contractions provided it was not occipitoposterior for occipitoposterior 2 hours time was given assessing the rotation of head if it was not rated within this time immediate delivery was effected either by L.S.C.S.

APGAR score was recorded in all cases at the end of 1 mm and 5 mm. All the patients with their infants were followed up to the time of discharge from the hospital. It was recorded whether patients were discharged with live baby in good health or baby expired before discharging the patients and it was also noted that whether the patient had any febrile illness during this time.

Results

Table 1: Control Group - Mode of delivery

Phase	No.	Spontaneous No. (%)	Forceps No. (%)	Caesarean No. (%)
Latent phase	27	17 (62.96)	06 (22.22)	04 (14.81)
Active phase	73	46 (63.01)	10 (13.69)	17 (23.28)
Total	100	63 (63%)	16 (16%)	21 (21%)

Out of 27 of those admitted in latent phase, 17 (62.96%) patients delivered spontaneously, 6 (22.22%) required forceps delivery for various indications and 4 (14.81%) patients required caesarean section for various indications.

Out of 73 of those admitted in active phase 46 (63.01%) delivered spontaneously, 10 (13.69%) required forceps for various indications and 17 (23.28%) required caesarean section, for various indications. These indications are shown in the following table.

Table 2: Control group - Indications for Caesarean Section

Sl. No.	Indications	No. of Patients
1	Foetal distress	7
2	C.P.D	9
3	Obstructed labour	2
4	Cervical dystocia	1
5	Elderly primi	2
	Total	21

The above table shows that C PD and fetal distress were the leading indications for caesarean section in the patients who were not managed by partogram.

Table 3: Control group - Duration of labour

Less than 12 hours	12 to 16 hours	More than 16 hours
41	10	49

The above table shows that more than 50% of the patients in control group were still undelivered by the end of 16 hours.

Perinatal deaths Study Group

This group consists of 100 primiparas at term in spontaneous labour without any obstetrical or medical complication. In this group labour was accelerated by artificial rupture of membranes (APM) and/or oxytocin drip at appropriate time to manage the patients actively, according to recommendation of studd2 and oxytocin drip 2.5 unit in 540 ml of 5% dextrose was started from the patients who did not have adequate contractions i.e. three contraction/b minutes each lasting for 40 to 60 seconds. The labour was closely monitored in such patients taking into account the foetal heart rate, care was taken to see that uterus is well relaxed in between the contractions.

In this group also out of 100 patients 27 were admitted in Latent phase and 73 were admitted in Active phase.

Table 4: Study group - Node of delivery

Phase	No.	Spontaneous No. (%)	Forceps No. (%)	Caesarean No. (%)
Latent Phase	27	21 (77.77%)	5 (18.51%)	1 (3.70%)
Active Phase	73	63 (86.30%)	6 (8.21%)	4 (5.47%)
Total	100	84	11	5

The above table shows that mode of delivery in 100 patients in study group, out of 27 patients admitted in Latent phase. 21 (77.77%) delivered spontaneously, 5 (18.51%) required forceps for various indications. 1 (3.70%) patient required caesarean section. Similarly, out of 73 patients admitted in Active phase, 63 (86.30%) delivered spontaneously, 6 (8.21%) required forceps and 4 (5.47%) required caesarean section for various indications, which are shown in the following Table.

Table 5: Study group - Indication for caesarean section

Sl. No.	Indications	No.
1	Secondary arrest of cervical dilatation and foetal distress	1
2	Secondary arrest of cervical dilatation	2
3	Prolonged second stage and foetal distress	1
4	Failure of descent	1
	Total	5

Table 6: Study group - Duration of labour

No. of Patients	12 to 16 hours	Less than 12 hours
100 patients	9 patients	91 patients

The above table shows that majority of the patients delivered by the end of 12 hours, and no patient was in labour by the end of 16 hours.

Table 7: Study group - Perinatal and Maternal deaths

Perinatal Deaths	Maternal Deaths
3	Nil

In our series no maternal death occurred and 3 perinatal deaths occurred out of which for 2 deaths patient was responsible.

Discussion

Table 8: Mode of delivery in study and control group

Mode of Delivery	Control	Study
Spontaneous	63	84
Forceps (outlet)	16	11
Caesarean	21	05

The above table shows the mode of delivery in study and control group. It is evident that with the policy of Active management of labour incidence of spontaneous vaginal delivery is increased to 84% from 63% in control group. Similarly incidence of forceps delivery is reduced to 11% in study group as compared to 16% in control group. There is a very significant decrease in rate of caesarean section i.e. 5% in study group as compared to 21% in control group. This significant decrease in incidence of operative delivery is consistent with the results of various series of different authors

shown in the following Table.

Table 9: Mode of delivery in different series of various authors

Authors	No. of Patients	Mode of Delivery		
		Spontaneous	Forceps	Caesarean
'O' Driscoll ^[6]	204	77.1%	18.9%	15%
Deejankar ^[7]	95	75.8%	20%	4.2%
Devantalasingh <i>et al.</i> ^[8]	375	76%	15%	4%
Parik ^[9]	63	84.1%	12.7%	3.1%
Present Series		84%	11%	5%

As far as comparison of mode of delivery in study and control group of present series is concerned it can be very well compared with that of Deejankar (1981) as the following

Table 10: Table shows Deejankar^[7]

Mode of Delivery	Authors Series		Present Series	
	Study	Control	Study	Control
Spontaneous	72 (75.8%)	69 (34.5%)	84 (84%)	63 (63%)
Low forceps	19 (20%)	90 (45%)	11 (11%)	16 (16%)
LSCS	4 (4.2%)	20 (10%)	5 (5%)	21 (21%)

According to one series of 624 cases by Philpott and Castle who managed labour partographially results are shown in the following Table.

Table 11: Philpott and Castle^[10]

	Authors Series		Present Series	
	Control	Study	Control	Study
Total No. of cases	738	624	100	100
Labour < 12 hours	67.5%	95.7%	41%	91%
Labour > 12 hours	32.5%	4.3%	59%	9%
Forceps	9.1%	13.4%	16%	11%
Caesarean section	9.9%	2.6%	21%	5%
Perinatal deaths	5.8%	0.6%	4%	3%

With regard duration of labour and mode of delivery our series is very well compared with the authors' series. Only inconsistency is found regarding perinatal deaths. Out of 3 perinatal deaths 2 were due to patients Negligence, while the third patient developed intrapartum increase in blood pressure for which pethidine 100 mg was given and the baby died because of pneumonitis 5 days later. While no maternal death was observed in both control and study groups of our as well as Authors series.

Conclusion

There were 3 perinatal deaths in study group for 2 of which patients was responsible and 4 perinatal deaths in control groups. No maternal mortality was seen in study group and control group. No morbidity was found in study group while 59% patients control group were in labour from more than 12 hours. Thus increasing the likelihood of sepsis and exhaustion.

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