

# PROTRACTED ACTIVE PHASE IN BREECH LABOUR—A HAZARD TO THE FOETUS\*

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## SUMMARY

Dilatation of cervix in active phase is analysed and rate of dilatation less than 1.2 cm per hour in primis and less than 1.5 cm per hour in mults is considered as protracted active phase and occurs in 71.5% of breech labour cases. It is more frequent in initial Zatuchni and Andros Score is low, and assessed birth weight is more and initial latent phase is prolonged. High Zatuchni and Andros score is no guarantee for fast dilatation of cervix, however Apgar Score occur in 68% of primiparae and 71.42% of multiparae with protracted active phase. Rate of cervical dilatation of less than one cm per hour (corresponding to Alert line) is ominous.

### Introduction

The evolution of uterine activity in breech, its duration and intensity are similar in unobstructed breech and cephalic presentation. Descent may initially be slower in breech presentation as compared to cephalic presentation, and among patients of similar parity cervical dilatation and effacement rates are approximately the same (Brenner, 1978). Friedman and Sachtablen (1961) found increased number of breech presentation in association with protracted active phase of dilatation. Labour management varies, some

authors strongly recommend caesarean section for all breech cases, whereas the majority favour vaginal delivery. There is also considerable difference of opinion as to the advisability of using pitocin stimulation in breech presentation for correction of slow progress in labour.

### Material and Methods

A study of the record files of 160 singleton breech cases (34 weeks or above) admitted in the labour ward of Smt. Sucheta Kripalani Hospital during the year 1978 and committed to vaginal delivery was carried out. From this record of initial history and obstetrical examination the Zatuchni and Andros score was calculated. The foetal outcome and progress of labour in respect to cervical dilatation in cm/hr was calculated.

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**Observation**

Of 160 cases, 63.12% were unbooked and 15 were less than 36 weeks gestation; new born weighed 2 kg or less in 14 cases. Initial ZA score was 3 or less in 23.75% (Table I). Cases observed in active phase were 123.

**Active Phase**

The mean duration of active phase was found to be  $7.736 \pm 2.121$  hours in primi and  $6.832 \pm 2.53$  hours in multi which was prolonged as compared to the mean given by Friedman for cephalic presenta-

tion (Table II). 8.57% of primi and 5.71% of multi had active phase more than one standard deviation of the mean and in 5.71% of primi and in 2.94% of multi active phase exceeded 2 standard deviations of mean.

Protracted AP. i.e. rate of cervical dilatation less than 1.2 cm/hr in primi and less than 1.5 cm/hr in multigravide was observed in 88 (71.54%) i.e. 50 (56.8%), primigravida and 38 (43.18%) multigravida; out of these only 9 were augmented with pitocin for correction of the abnormality (Table III).

TABLE I  
Distribution of 160 Cases

	No.	%
Total No. of cases (n)	160	100
Booked	59	36.27
Unbooked	101	63.12
<i>Distribution according to pregnancy duration</i>		
< 36 wk	15	9.37
37-38 wk	77	48.12
39-40 wk	64	40.00
> 40 wk	4	2.5
<i>Distribution of Birth weight</i>		
1.5-2.0 kg	14	8.75
2.0-2.5 kg	40	25.00
2.5-3 kg	80	50.00
3.0-3.5 kg	26	16.25
<i>Distribution of ZA score on admission</i>		
3 or less	38	23.75
4-5	75	46.87
6-7	38	23.75
8 or above	9	5.62

TABLE II  
Mean Duration of Active Phase in Breech Labour According to Parity  
(in hrs + SD)

	Primi	Multi
Study group	$7.736 \pm 2.121$	$6.832 \pm 2.253$
Friedman's (Cephalic presentation)	4.9	2.2

**TABLE III**  
Frequency of Active Phase in Study Group

	No.	%
Cases observed in A.P.	123	100
Protracted A.P.	88	71.54
No. of cases augmented	9	

*Relation of Active phase to Z.A. Score*

A low ZA score does predict prolongation of AP but a high score does not guarantee against it. Out of 88 cases with protracted AP, 50 were primigravida and 38 multigravida. A score 1-5 was seen in 90% primis and 69% of multis. A high score 6-10 was detected in 10% primis and 31.57% of mults showing a prolongation of AP during labour (Table IV).

**TABLE IV**  
Distribution of ZA Score in 88 Cases of Protracted Active Phase

ZA score	Primi (n=50)		Multi (n=38)	
	No.	%	No.	%
1-3	19	38.00	8	21.05
4-5	26	52.00	18	47.36
6-10	5	10.00	12	31.57

The mean duration of AP decreased with increasing ZA score. In primi it decreased from 8.3 hours in patients with ZA score of 3 or less to 6.6 hours in score group 6-7.

*Relationship to Latent Phase*

Protraction of AP was found to follow prolonged LP in a higher proportion of cases i.e. 90.47% in primi group and 68.57% in multi group (Table V).

*Relationship to Birth Weight*

Active phase was found to be prolonged in 62.5% and 57.69% of cases with

**TABLE V**  
Correlation of Protracted Active Phase (Pr-AP) With Prolonged Latent Phase (LP)

	Primi	Multi
Total Pr LP	21	32
Pr. AP foll Pr LP	19	24
Percentage	90.47	68.57

foetal weight 2.5-3 kg and 3-3.5 kg respectively. Correspondingly, 1 min Apgar Score was low in fetal weight 1.5-2 kg and 3.0-3.5 kg i.e. 11 cases (78.57%) and 19 (73.07%), whereas 45 cases (54.11%) were born with apgar score 7-10 in weight group 2.5-3 kg i.e. best immediate foetal outcome was in this group (Table VI).

Protracted AP had a poor immediate foetal outcome as shown by one min. Apgar score i.e. 68.85% primi and 71.42% of mults with Pr AP had one min AS-1-6 (Table VII).

MEAN INDUCTOGRAPH IN THE STUDY GROUP

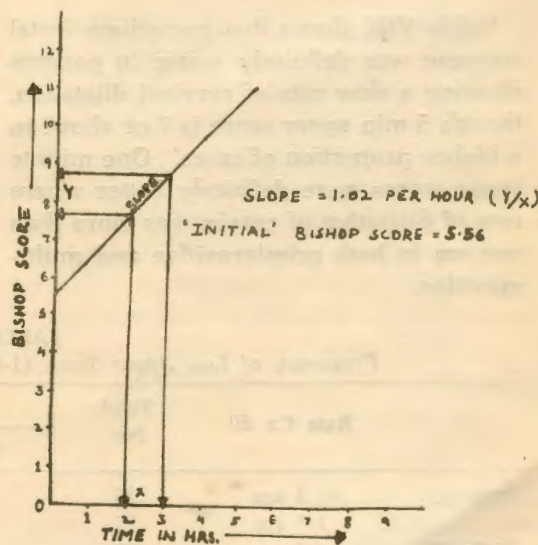


Fig.

TABLE VI  
Relationship of 1 min Apgar Score (AS) with Protracted AP

Parity/AP score	Total	1-6		7-10	
		No.	%	No.	%
<i>Primi</i>					
Normal AP	13	1	7.69	12	92.30
Pr AP	51	36	68.85	15	29.41
<i>Multi</i>					
Normal AP	24	8	33.33	16	66.66
Pr AP	35	25	71.42	10	28.57

TABLE VII  
Relationship Between Foetal Weight and One min A/S  
N = 160

Weight (kg)	1-6		7-10	
	No.	%	No.	%
1.5-2	11	78.57	3	21.42
2.0-2.5	12	30	28	70
2.5-3.0	35	43	45	54.11
3.0-3.5	19	73.07	7	26.92

*Apgar Score in Relationship to Rate of Cervical Dilatation*

Table VIII shows that immediate foetal outcome was definitely worse in patients showing a slow rate of cervical dilatation, though 5 min apgar score is 7 or above in a higher proportion of cases. One minute apgar scores were definitely better where rate of dilatation of cervix was more than one cm in both primigravidae and multi-gravidae.

TABLE VIII  
Frequency of Low Apgar Score (1-6) With Rate of Cervical Dilatation

Rate Cx dil	Total No.	One min AS		5 min AS		
		No.	%	No.	%	
Primi 53	< 1 cm	26	15	57.7	6	23.1
	1-3 cm	27	8	29.6	3	11.1
Multi 70	< 1 cm	20	12	75	4	20.0
	1-3 cm	50	20	40	5	10.0

*Discussion*

Once the obstetrician has decided against elective caesarean section in breech, it becomes obligatory to watch progress of labour with extreme vigilance. Dunn and Van Vhooris (1965) concluded that duration of first and second stages of labour in both nullipara and multipara was similar to Friedman's (1955, 1956) analysis of vertex presentation. Earlier study had shown prolongation of latent phase in 42.8% of nulliparae and 41.3% of multiparae, the latent phase being termed prolonged if it exceeds 8.6 hours in primiparae and 5.3 hours in multiparae (Mirchandani and Khurana, 1985). It also revealed that prolonged latent phase was important as it was likely to be followed by protracted active phase.

In the present analysis of 123 breech labour cases, mean duration of active phase was found to be prolonged in both

nulliparae and multiparae when compared to the mean given by Friedman and Sachtablen for Vertex presentation (Table III). These authors did note higher incidence of protracted active phase; in present study it was observed in 77.8 per cent (88 cases). The definition of 'protracted' being based on rate of dilatation less than 1.2 cm and 1.5 cm per hour in nulliparae and multiparae respectively.

The perinatal mortality and low Apgar Scores are found significantly higher in cases with protracted active phase (Mirchandani and Khurana, 1985). Present study (Table VI), confirms that this criterion is valid and one should expect at least same rate of dilatation as in vertex. Longer mean duration of active phase in present study and fewer cases exceeding one and two standard deviation (Table III) suggest that the breech cases are often left longer in active phase believing that prolonged labour is a 'normal' concomitant of breech labour.

In approximately 70 per cent cases with protracted active phase one minute apgar score is 6 or less in both primi and multiparae. This emphasizes that when active phase needs augmentation one should anticipate protracted active phase in primigravidae, in cases with initial low Z.A. score and where baby is assessed to be 3.0 kg

weight or above. Rate of dilatation of cervix less than 1 cm i.e. corresponding to 'Alertline' of Philpot is significantly more associated with low one minute apgar score (Table VIII). Five minute apgar score of 7 or above was more frequent if rate of dilatation was more than 1 cm per hour both in primi and multiparae (Table VIII). This study suggests that slow dilatation of cervix during breech labour should not be considered as 'normal', it warrants active management in the interest of the baby.

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