ACTIVE MANAGEMENT OF LABOUR

by

(Mrs.) Asha Sinha,* M.B.B.S., M.S.

During recent years an active approach to labour has been adopted progressively at many obstetric centres. Any measure that would shorten the duration of labour without increasing the maternal and perinatal mortality and morbidity are most welcome.

Acceleration of labour minimise the load on larger obstetric centres, especially in countries like India where the health centres or maternity hospitals cater for very large areas.

Material and Methods

Under the present work the action of oxytocin for the acceleration of labour was studied on 200 pregnant women, who were in labour, and admitted in the dept. of Obstetrics & Gynaecology of Darbhanga Medical College Hospital during the year 1974-76. For the purpose of study oxytocin was given in the first, second and third stages of labour.

Due precautions were taken to exclude all those cases who had antenatal complications, bad obstetrical history, cephalopelvic disproportion, pelvic contraction and other associated systemic diseases and only normal healthy pregnant mothers were taken up.

One hundred normal healthy pregnant women without any complications, in whom labour was not accelerated by syntocinon drip who delivered, normally served for the purpose of control.

*Tutor, Deptt. of Obst. and Gynec. S. K. Medical College, Muzaffarpur.

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The patient was made comfortable in supine position, vaginal examination was made to access the cervical dilatation. In present work 2.5 units of oxytocin (syntocinon) was mixed with 540 cc. of 5% dextrose solution. After proper aseptic care a drip infusion was started at a rate of 20 drops per minute. Then the rate of the drip or the strength of the solution was gradually increased till proper uterine contractions were established. The patient was kept under constant supervision throughout the course of infusion.

The drip was continued for 30 minutes after the third stage of labour was over. Its effect on duration of third stage and complications if any was noted and compared with those of the control groups.

Results

Table I shows the number of cases studied for acceleration of labour with oxytocin (syntocinon) drip used in different stages of labour.

Table II shows the success rate of the delivery by acceleration method. In the total series of 200 cases, out of which 89 were primigravidae, in only 3 cases the acceleration was unsuccessful. In 2 of the cases delivery occurred after 24 hours and in I case L.S.C.S. was performed.

Table III shows that the duration of the third stage of labour by acceleration method was nearly half the duration observed in the control group.

TABLE I
Cases studied

Series	Indications	Primigravidal (No. of cases)	Multigravidal (No. of cases)	Total No. of cases
Study Group	Early first stage of labour (cervical dilatation +2 to 6 cm.)	76	90	166
	Late first stage of labour (Cervical dilatation —7 to 10 cm.)	13	21	34
	Second stage of labour	91	108	199*
	Third stage of labour	91	108	199
Control group	Early first stage of labour	26	57	83
	Late first stage of labour	4	13	17
	Third stage of labour	30	70	100

* One case was delivered by lower segment caesarean section. Even after 6 hrs. of oxytocin drip infusion cervix did not dilate possibly due to cervical dystocia and there was foetal distress—so caesarean section was attempted. In this case drip was discontinued in first stage of labour.

TABLE II
Success Rate by Acceleration of Labour

Series	Total No. of cases	Successful acceleration within 12 hours		Doubtful acceleration 12-24 hrs.		Unsuccessful accelera-; tion beyond 24 hrs.	
		No. of cases	Percen-tage	No. of cases	Percen-tage	No. of cases	Percen-tage
Primigra-vidae	89	79	88.76	7	7.82	3	3.37
Multigra-vidae	111	108	97.29	3	2.70	-	-

TABLE III
Duration of Third Stage of Labour

Series	Total No. of cases	Duration of third stage of labour		
		Minimum time in minutes	Maximum time in minutes	Mean average time in minutes
Study group	199	2	14	4.80
Control group	100	5	30	9.38

TABLE IV
Apgar Score of Babies

Condition of cervix	Study group		Control group	
	No. of cases	Apgar-score (average)	No. of cases	Apgar-score (average)
Two centimeters dilatation	56	8.0	23	9.5
Four centimeters dilatation	109	8.8	60	9.4
Six centimeters dilatation	34	9.5	17	9.1

Table IV shows apgar-scores of babies born in study group and control group. The ultimate foetal salvage was 100%.

Discussion

In the present work the average total duration of labour observed in the control group in primigravidae was 13 hours and in majority of cases it prolonged beyond 12 hours, in some reaching even upto 48 hours. In the multigravidae patients the total duration of labour was 5 hours 46 minutes. In these patients the total period of labour was left on its own natural course. In the study group the course of labour was accelerated by oxytocin drip (syntocinon) in their different stages of labour. The idea of accelerating labour was to induce delivery within 12 hours of the institution of the drip, especially in primigravidae and more younger pregnant mothers. The results obtained in the present series of 200 normal pregnancies including both primigravidae and multigravidae show that this can be achieved in a good majority of cases provided the obstetrician assumes direct responsibility of controlling the course of labour instead of waiting in the hope that it may be concluded within a reasonable period of time.

The use of oxytocin in multigravidae were attended with rupture of uterus in many series. In the present series, oxytocin was used in 111 multigravidae in different stages of labour, and no case of rupture uterus was seen, rather the success rate achieved in terms of 12 hours was to the tune of 97.7 per cent.

Anderson and Turubull (1968) considered that an ideal regime for oxytocin administration would be to start with a low dose and to increase the amount gradually at shorter interval until strong, regular uterine contractions were established and the optimum oxytocin dose would therefore, depend upon the strength and frequency of uterine contractions. In the present series also the dose was gradually increased starting from the initial level of 2.5 units per 540 ml. of 5 per cent dextrose solution till proper uterine contractions were obtained.

The use of oxytocin for the proper management of the third stage of labour has been employed by various workers and all have stressed its efficacy in the management of third stage.

In the present series, the duration of third stage of labour by the acceleration method was remarkably shortened in comparison to the control group and in all the subjects of the study group the period was uneventful. In only 1 case of the study group postpartum haemorrhage was observed and the cause was cervical tear due to precipitate labour.

In the present series, on the basis of Apgar-score no difference in the foetal

condition was observed in the acceleration group than in the control group.

In the present series, following an intravenous oxytocin drip no alarming rise in both systolic or diastolic blood pressure was observed.

Since the incidence of prolonged labour was negligible the incidence of complications was nil.

Conclusions

This active management of labour has saved so many mothers and babies from damage and death. The shorter is the duration of labour less impact it will produce both psychologically as well as physically, especially in primigravidae.

It was concluded that in all the cases of primigravidae and even in multigravidae after careful assessment of the foetus-passage relation, routine acceleration of labour should be attempted in order to minimise far reaching deliterious effects of prolonged labour on both the mother and the foetus.

It was further concluded that by accelerating the process of labour one can minimise the load of the maternity centres which are getting cases from extensive areas.

References

1. Anderson, A. B. M. and Turnbull, A. C.: J. Obstet. Gynec. Brit. C'wlth. 75: 271, 1968.