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Original Article

A Programmed Labour to Optimize Labour Outcome

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Abstract

Background: *A Programmed labour following a protocol teaches the goal of safe motherhood. The present study on programmed labour protocol implemented to shorten the duration of labour, to optimise pain relief during labour, to monitor labour by partograph and to enhance vaginal birth. The prime objective of the study is to evaluate the effect of programmed labour on duration of labour and to assess efficiency of analgesics in reducing severity of labour pain.*

Materials and methods: *Total 100 cases of low risk pregnant women both primi and multipara were included in this study. It was designed to low risk pregnant women with cephalic presentation without evidence of CPD- either with spontaneous onset of labour or waiting for induction of labour at 41^{+} wks pregnancy. Patient with labour pain allowed to move. Pain relief was done either by pharmacological or non-pharmacological method. Labour was monitored by partograph.*

Results: *The duration were shortened in all stages of labour specially in active phase that was (Mean± SD- 3.08 hr ± 0.83), Significant paint relief in 76% cases (Mean SD of score 2.08 ± 0.62). The rate of vaginal delivery is more in programmed labour which is about 95% in this study. There is also significant reduction of maternal and fetal morbidity and mortality.*

Conclusion: *The programmed labour is simple, easy, cheap and effective method of painless and safe vaginal delivery. Significant reduction of pain by programmed protocol avoid hyperventilation of mother, maintain circulation, thereby increase chance of vaginal delivery.*

Key words: Analgesia; Non pharmacological maneuver; Pain relief; Programmed labour.

INTRODUCTION

Programmed labour is an indigenously developed guideline for labour management. Labour is physiological but due to anxiety, fear, stress, pain and agony a women suffers beyond description. Programmed labour aimed to alleviate this misery. Programmed labour concept- rest on 3 pillars that is providing optimum pain relief- by non pharmacologral (Massage, walking, shower) and pharmacological (Inj. Tramadol, Drotaverine, Epidural) Level of analgesia assessed using following pain scale 0,1,2,3,4,5.[1-4] It also ensure progress of labour and active management of labour and monitoring of labour by partogram and labour care guide.[5-8] The aim of the present study was to evaluate the effect of programmed labour on duration of labour, to assess efficiency of analgesia in reducing severity of labour pain and to evaluate the chance of vaginal delivery as well as maternal and fetal morbidly and mortality.

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MATERIALS AND METHODS

The present study was a prospective clinical study following programmed labour in Department of oObstetrics & Gynecology in Chattagram Maa-O-Shishu Hospital during January- December 2019. It was approved by Ethical Committee of the institute. Programmed protocol started from OPD when patient comes for ANC. Cervical ripening by sweeping was done in all low risk pregnant mother at 38 wks of pregnancy All patients were counselled about pain when in labour. On admission, CTG was done. Per abdominal examination was done to see lie, presentation, position, FHR, Per vaginal examination was done to exclude ccphalopelvic disproportion. Every women were counselled regarding drugs, used in programmed labour. They were also advised to practice walking & birthing position. Selection of dearest person to accompany her during labour. After proper counseling informed written consent was done. Level of analgesia assumed using following scale 0- no pain, 1 mild pain, 2- moduate pain and 3- excellent pain. Counseling and coping with pain was done in ANC and antenatal classes held once weekly in OPD on basis of booklet supplied to patient (Gorvoboti O Shoishokotha). Low risk pregnant women 20-38 yrs age at their 37-41+ wks of gestation with vertex presentation, were included in this study without any identifiable medical or obstetric complications. High risk mother such as elderly, twin Pre-celanpsia, Antepartum hemarshage, Diabetes, CPD were excluded from this study.

RESULTS

Most of the cases in the study belong to age group 26-30 yrs. Among 100 cases 85 of the cases had severe pain to seek relief. 5 percent had unbearable pain and demanded pain relief and 10 cases had mild pain.

Table I Pain relief score

Pain relief score	No, of cases	Percentage
Score 1	22	22%
Score 2	57	57%
Score 3	19	19%
LSCS	2	2%
Total	100	100

(Mean score ± SD of 2.8 ± 0.62).

The above table shows in 76% of the parturient the pain relief following the programmed labour was significant, 57% achieved moderate relief of pain, 19% had excellent and 22% had mild relief.

Table II Distribution of cases according to duration of active phase

Duration in hours	No, of cases	Percentage
<2 hrs	10	10%
2-4 hrs	82	82%
4-6 hrs	06	6%
LSCS	2	2%

Mean ± SD-3.08 ± 0.83.

From the above table it can be observed that active phase of labour was less than 4 hrs in 82% followed by 10% had a duration of less than 2 hrs. only 6% had duration of 4-6 hrs. In active phase mean is 3.08 ±.83, stage II mean 45±15.22, 3rd stage mean is 6.02±2.2

Table III Distribution of cases during 2nd stage

Duration in (In min)	Numbering case	Percentage
<30	01	1%
30-40min	60	60%
40-50min	22	22%
50-60min	10	10%
>60 min	05	5%
LSCS	2	2%
Total	100	100

Mean + SD-45±15.22.

Table IV Distribution of cases during 3rd stage

Duration (Min)	No	%
<3	10	10%
<3-5	75	75%
5-10	7	7%
>10	6	6%
LSCS	2	2%

Mean ± SD-6.02 ± 2.2.

Table V Mode of delivery

Mode of delivery	Number of cases
Vaginal	95
Ventouse	2
Forcep	1
LSCS	2

Programmed labour has significantly reduced the number of instrumental delivers only 3 cases for non reassuring fetal heart rate in 2nd stage. LSCS was done for hypertonic uterine construction and fetal distress in 1st stage of labour.

Table VI Side effects and complications to the mother

Complication	Numbering cases	Percentage
Tachycardia	Nil	-
Nausea/ vomiting	07	7
Rise or fall of BP	01	-
Pyrexia	Nil	-
Vaginal tear	Nil	-
Cervical tear	Nil	-
Loose stools	03	3
PPH	Nil	-
Drowsiness	Nil	-

Table VII Apgar Score

Timing	Apgar score	Number of cases
At 1 min	4-5	03
	6-7	97
	Mean ± SD	5.96±.26
At 5 min	6-7	00
	8-9	100
	Mean ± SD	8.26 ± .46

DISCUSSION

Programmed labour protocol was designed to ensure shorter, safer and relatively painless veginal delivery making it joyful and satisfactory event. Labour and childbirth are natural event. It should be an event of joy and satisfaction. But due to anxiety, fear of pain and surrounding women suffers beyond description childbirth turns into a harrowing experience for mother. This leads to increase release of adrenaline which impair release of oxytocin and also impair sensitivity of uterine muscle to oxytocin. So natural and physiological event becomes a pathological one. So, by keeping the patient free from anxiety, stress and fear of labour pain can be have better oxytocin release and satisfactory uterine contraction. Anteratal counseling-coping for pain, intrapartum optimasation of pain by coping and injectable analglesia can reduce patient anxiety, pain and stress. So, labour events progress in natural way and childbirth become satisfactory and joyful.

In our study, Duration of active phase Mean ISD-3.08 hr±0.83, Stage 2-Mean ±SD-45 min ±15.22, Stage 3- Mean ±SD-6.02 min±2.2. A study found duration of active phase of labour to be 3.4 hrs.[3] Dafary et al. found duration of active phase of labour to be 3.5 hrs and that 2nd stage of labour to be 26 min.[5]

We observed that, 76% had pain relief out of them 19% experienced excellent pain relief and 22% had mild pain relief. Meena jyoti et al noticed that 54% achieved good & 32% achieved moderate pain relief.[5] Veronica et al reported total pain relief in 70% case.[5]

None of the patient had any major complications of labour. In programmed labour group, drug related side effects like nauses, vomiting, drownsiness, tachycardia were seen. All the side effects subsided by 12 hours of delivery.

Veronica et al. had similar findings. Tachycardia (80%) was the commonest side effect followed by nausea and vomiting (10%).[6] In our study majority (95%) of the women delivered by normal vaginal delivery. Caesarean section rate was 2% of the group, vaginal operative deliveries were 3%.

Fetal outcome in all the cases were good as shown by the good apgar score.

CONCLUSION

Programmed labour protocol provides effective analgesia with minimal side effect and safe for fetus. From the study it can be concluded that programmed labour protocol effectively reduces the duration of labour, enhance vaginal birth and also reduces both caesarean section and operative vaginal delivery and its inherent complication.

DISCLOSURE

All the authors declared no competing interest.

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