

A PROGRAMMED LABOUR - PROTOCOLSavita Konin¹, Nishtha A. Mahabalshetti²**HOW TO CITE THIS ARTICLE:**

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ABSTRACT: A Prospective randomized Clinical study of outcome of labour following. "A Programmed labour. Protocol" was done at Department of OBG, MRMC Gulbarga. The Protocol was aimed with dual. Objective of Providing Pain relief during labour and teaching the goal of safe motherhood by optimizing objective outcome. **AIMS AND OBJECTIVES:** Shortening of duration of labour. Effect of labour analgesia. Monitoring of the events during labour. Lowering the incidence of operative deliveries. **METHODS:** 100 cases primi pregnant women admitted in labour room are randomly selected. It is designed to apply to low risk primi parous, singleton cephalic presentation without evidence of CPD and spontaneous onset of labour. **RESULTS:** Shortened duration of all the stages of Labour, especially significant reduction in duration of active phase of labour. **CONCLUSION:** The programmed labour is simple easy and effective method for painless and safe delivery.

KEYWORDS: Programmed labour, oxytocin, , Amniotomy, Pain relief, Prostaglandins analgesics, antispasmodics and Partogram.

INTRODUCTION: Programmed labour is an indigenously developed for the labour management, developed with the objective of providing optimum pain relief and to hasten the labour process for better obstetric and neonatal outcome.

Labour is an important event with unique experience, exclusively in a woman life which gives her the greatest satisfaction by delivering her child "The wonder creation of master craftsman".

The labour is a physiological but painful event the distress and agony action often women suffer during labour certainly beyond description. Attempt to alleviate this misery has led to the development of concept of programmed labour.

This protocol incorporates 3 basic Principle^{1,2,3}:

1. Active management of labour.
2. Synergistic applications of analgesics and antispasmodics during active phase.
3. Plotting the patient's partogram along the side of the standard namogram.

Active management of Labour: Adoption of the policy of active management of labour with the help of anniotomy during active phase and judicious use of Oxytocin or Prostaglandin resulted in the shorter labour with better obstetric outcome and lowering rates of caesarean section.⁴

Obstetrics Analgesia: Labour analgesia ensures relief from pain controls alterations of placental circulation there by safe guarding the foetus against hypoxia and depression at birth. Pain relief prevents maternal hyperventilation and under muscular efforts which exhaust the mother. Pain relief favors cervical dilatation resulting in labour of shorter duration.⁵

Although epidural analgesia offers the best method of providing pain relief. One must accept the fact that service of trained anesthesiologist is not universally available. Hence the adoption of

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analgesia protocol of combining analgesic and antispasmodic drugs in smaller optional synergistic doses proved to be an asset in providing substantial pain relief.

Partography⁶: The graphical representation of the labour introduced by friedmann (1955) prims the corner stone of protography. Partogram provide documentation of labour events which are easy to follow and help to identify dysfunctional labour in good time and facilitate planning of timely optional objective interventions.

MATERIALS AND METHODS: This is a prospective clinical study of outcome of labour following programmed labour in 100 cases of primigravidae cases were randomly selected.

Inclusion Criteria:

- Age, between 18-35yrs.
- Primigravida with singleton pregnancy with cephalic presentation with spontaneous onset of labour.
- Active phase of labour with cervical dilatation 3-4cms and 50% effaced.
- No clinical evidence of cephalopelvic disproportion.
- Liquor should be clear after ARM.

Exclusion Criteria:

1. High risk pregnancy.
2. Intra uterine death / malformed baby.
3. Medical disorder like cardiac disease and diabetes mellitus, respiratory disease etc.

METHODS: On admission to Labour room detailed history was takes a thorough physical and general examination was done. Per abdominal examination was done Lie, Presentation, position was confirmed Duration, intensity and frequency of uterine contraction were noted. Foetal heart sound was auscultated.

Per vagnial examination was done. Cervical dilation, effacement, position, station of presenting part will noted and pelvic assessment was done to rule out CPD, ARM was done after confirming colour of liquor case was selected for study. All Patients were subjected for basic investigation.

Recording of pain Score:

Pain Scores:

- | | |
|-------|--|
| Score | 0 - No appreciable pain present. |
| | 1 - Mild pain (bearable patient does not desire any plain relief). |
| | 2 - Moderate pain (Severe enough to seek relief). |
| | 3 - Severe Pain (unbearable, patient demand pain relief). |

Pain relief Score :

- | | |
|-------|---|
| Score | 0 – No relief of pain |
| | 1- Mild relief of pain but not to the desired |

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- 2 - Modulate (substantial relief of pain)
- 3 - Excellent relief of pain

Every women were counseled regarding drugs used in programmed labour. Informed consent was taken. Through the course of labour, uterine contraction, foetal heart rate, maternal pulse blood pressure was monitored partograph was plotted.

Regarding the use of Drugs:

1. Start intravenous infusion line with Ringer's lactate (500ml).
2. Oxytocin (5U added to the drip 5mu/ml) gradually increased every 30min till 3 contractions lasting for 45 sec in 10min.
3. Administer 6mg of pentazocin (30mg=1ml in 9ml of normal saline then give 2ml) and 2 mg of diazepam (10mg=2ml in 8ml of normal saline give 2ml) after dilution as a bolus slowly through the infusion line.
4. Administer inj. Tramadol in the dose of 1-1.5mg/kg body weight deep intramuscularly, along action antispasmodic inj. Drotaverline, 40mg intravenously.

Regarding the relief of pain visual analogue were recorded. Active phase duration, II and III stage duration and blood loss during III stage mode of delivery and indication for instrumental and emergency LSCS were noted.

The outcome of the study recorded as Follows.

1. Duration of labour.
2. Pain relief during labour.
3. Method of delivery.
4. Foetal condition of birth (apgar score).
5. Perinatal morbidity and mortality.
6. Side effect to the mother and child.

RESULT:

- Most of the cases in the study belong to the age group 21-25yrs with gestation age between 37-42wk
- Among 100case 86of the cases had severe pain to seek relief 3 patients had unbearable pain and demanded pain relief and 10 case had mild pain.

Pain relief score	Number of cases	Percentage
Score 1	20	20
Score 2	60	60
Score 3	19	19
L. S. C. S	01	01
Total	100	100

Table no1: Pain relief score

Means score & standard deviation of score 2.08 ± 0.63 .

The above table shows in 79% of the parturients the pain relief following the programmed labour was significant 60% achieved moderate relief of pain and 19% had excellent & 20% had mild relief.

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Duration in hrs	Number of cases	Percentage
Less than 2	16	16
2-4	80	80
4-6	03	03
L.S.C.S	01	01
Total	100	100

Table no 2: Distribution of cases according to duration active phase

Mean \pm SD----- 3.05 \pm 0.85

From the above table it can be observed that active phase of labour was less than 4hrs in 80% followed by 16% had a duration of less than 2hrs only 3% had duration of 4hrs there is a significant decrease in duration of active phase of analgesic & antispasmodic drug.

There will be no variation in duration of second and third stage of labour, total duration of labour. In active phase mean is 3.05 \pm 0.85, II stage mean 28.95 \pm 19.82, III stage mean is 4.03 \pm 1.32.

The amount of blood loss in III stage of labour in study group was between 80-120ml 95% whereas 4% had blood loss between 150-300ml. None had a loss of more than 300ml there is a significant reduction in third stage blood loss.

Duration (in min)	Numbering case	Percentage
<25	01	01
25 to 30	72	72
30 to 35	21	21
> 35	05	05
L.S.C.S	01	01
Total	100	100

Table no 3: Distribution of cases according during second stage

Mean + S.D 28.92 \pm 19.82

Duration	Number of cases	Percentage
3	16	16%
3.1 to 5	83	83%
>5	-	-
L.S.C.S	01	1%
Total	100	100%

Table no 4: Distribution of cases according to duration of III stage

Mean \pm SD 4.03% \pm 1.32

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Blood Loss	Number cases	Percentage
80-120	95	95%
150-300	04	04%
>300	-	
L. S. C. S	-	-
Total	100	100%

Table no 5: Blood loss during third stage

Mean blood loss with stand deviation 108±42

Mode of delivery	Number of case
FTND	18
FTND with RMLE	78
Forceps	00
Vaccum (NRFHR)	01
LSCS	01
Total	100

Table no 6: Mode of delivery

Programmed labour has significantly reduced the number of instrumental delivers 3 cases were vaccum delivery because of Non-reassuring fetal heart rate 1 case was taken up for LSCS for same reason.

Complication	Numbering case	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 no 7: Side effects and complication to the mother

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At 1 min	Apgar score	Number of case
	4-5	03
	6-7	97
	Mean \pm SD	5.96 \pm 0.26
At 5 min	6-7	00
	8-9	100
	Mean \pm SD	8.26 \pm 0.46
Table no 8: Apgar score		

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

DISCUSSION: Labour and child birth are the Natural events. Child birth should be an event of joy and satisfaction but many times the child birth turns into a harrowing experience for the mother. concept programed labour has been introduced by Dr. Daftacy in 1992. Programmed labour protocol incorporates three basic principles:

1. Active management of labour.
2. LabourAnalgesia.
3. Plotting the partography.

In the present study cases were managed with the active management of labour with ARM and oxytocin acceleration pain relief with dizepam. Pentazocin dilution, Tramadol, Drotavarin were used, the active management of third stage was done by oxytocin infusion present study shows that there is shortening of duration of the labour, especially active phase of labour. It was 3.05hrs. The duration of II and III stage of the labour were also reduced i.e.28.92mm and 4.03min respectively.

The present study shows significant relief of pain in 79% of the parturients. 60% had mild relief and 19% had moderate relief.

The mean blood loss during III stage of labour was 108ml.

In the present study majority (96%) of the women delivered by normal vaginal delivery caesarean section rate was 1% of the group, vaginal operative deliveries were 3%.Fetal Outcome in all the cases were good as shown by the good apgar score.

CONCLUSION: Modern obstetrics has no place for prolonged labour with all its hazardous accompaniments, including maternal infection, obstructed labour, uterine rupture and post-partum haermorrhage which at times may end with maternal mortality. Today we strive to minimize the duration and inconvenience of labour both for the patient, as well as for the obstetrician.

This study shows that programmed labour protocol in primigravidea has got definite role improving the obstetric outcome. From the present study, it can be concluded that:

- Programmed labour protocol effectively reduces the duration of labour.
- The protocol significantly reduces the pain during the labour.
- Improves the maternal and neonatal outcome.
- Reduces the average blood loss during III Stage of labour.
- Programmed labour reduces the need for operative delivery both caesarean section and vaginal operative deliveries and its inherent complications.

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