

NATURAL DELIVERY IN 1500 AFGHAN PRIMEGRAVIDAE

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ABSTRACT

Objective: To assess the advantages and disadvantages of natural labour with minimal intervention in 1500 primigravidae.

Methodology: It was an open observational study conducted at department of Obstetrics and Gynecology, Mercy Hospital, Peshawar, Pakistan, from May 31, 2000 to June 07, 2002. One thousand five hundred Afghan primigravidae at or above 36 weeks of gestation went through natural labour. Components of "active labour" management were avoided as far as possible.

Results: The group had a low induction and augmentation rate. Breech, forceps and vacuum extraction accounted for 114 cases. The remaining 1340 women had vertex delivery with the following outcome: No episiotomy and no tear in 60.3%, minor laceration in 5.4%, first degree tear in 18.2%, second degree tear in 5.8% and third degree tear in one patient only. Cervical tears occurred in 0.44% cases. Artificial rupture of membranes was only performed for medical or obstetrical indications. The average duration of third stage was 8 minutes and PPH rate 1.2% inspite of Non-use of oxytocics. Low Caesarean Section rate (4.7%) low perinatal mortality and "zero" maternal mortality speak in favour of "masterly inactivity".

Conclusion: Natural labour with minimal intervention appears to be safe, gratifying and economical.

KEY WORDS: Primigravidae, Natural labour, Minimal intervention.

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INTRODUCTION

Child birth in the human and other mammals is a natural physiological process. It has been going on for millions of years, mostly without the help of a midwife. Majority of these newborns are generally normal and their

mothers healthy. There are, however, occasions when complications threaten the life and health of the baby or the mother. Some complications can crop up abruptly and unexpectedly. Some form of assistance or intervention becomes unavoidable in such circumstances.

Good and regular antenatal care can prevent some complications and predict others. Modern obstetric practice has greatly reduced the hazards of labour for mothers and their babies. Many relatively minor interventions are widely practiced for making labour and birth safe and speedy. These include induction and augmentation of labour, artificial rupture of membranes (ARM), a number of foetal monitoring modalities, episiotomy and the use of oxytocic drugs to shorten the third stage of labour. Despite their undisputed advantages, these measures are not entirely without disadvantages.

The gestation period in these 1500 primigravidae was 36 weeks or above. They were

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economically disadvantaged Afghan refugees. Most such patients gravitate towards Mercy Hospital, Peshawar, on account of its being a semicharity facility. Many Afghan women dislike episiotomy; some of them even falsely claimed to have had normal babies before, so as to avoid episiotomy.

Natural labour boosts the young mother's self-confidence and imbues her with the pride that she made it on her own. Majority of these women desire a large number of offspring because of the high perinatal and child mortality, tribal feuds and wars which reduce effective manpower. Most of these women are reluctant to accept intervention like caesarean section that might curtail their procreative potential. Furthermore, a first delivery by caesarean section renders subsequent deliveries hazardous if they cannot reach a hospital in time.

Natural labour has positive implications for the impecunious patient and the cash-starved hospital. Natural labour under a policy of so-called "masterly inactivity" saves large sums of money that would otherwise be consumed by oxytocic drugs, anaesthetic agents, analgesics, antibiotics, syringes, i.v. canulae, i.v. fluids etc. used in interventional or "active" obstetrics.

It was not a strictly comparative study or a controlled one. It was only an observational study based on a policy of minimal intervention, allowing the labour to proceed naturally and assessing the outcome for the mothers and their babies.

PATIENTS AND METHODS

The study involved a total of 1500 Afghan refugee primigravidae. All deliveries were conducted by qualified doctors. Patients were allowed to progress under supervision naturally and deliver with minimal or no interference by the attending doctor, except supporting the perineum. Women who, for maternal or foetal reasons, had to undergo Caesarean section, were excluded from the study. The period of gestation of these patients in this series was 36 weeks or above and majority of them were poor.

Age Group: The average age of the whole group of 1500 women was 23.76% years. Teenagers numbered 167 (11.1%) and the youngest amongst them was 15 years old. Thirty-two patients were over 30 years old. The oldest amongst them was 35 years old.

Marital History: All the 1500 had been married for an average duration of one year and five months. A total of 872 (60%) delivered within one year of marriage, while 1321 (90%) had their first delivery within two years of marriage. The longest married life at first delivery was 18 years.

Measurements: Height and weight were recorded in 1493 and 1495 cases respectively. The average height was 153.8 cm and the average weight 57.8 kg. Those shorter than 150 cm numbered 170(12%).

Blood Groups: Blood group and Rh(D) status were known in 1497 cases. Of these, 1364 (91.1%) were Rh (D) positive. Group B was the commonest while AB the rarest of the ABO groups.

Problems Associated with Pregnancy: Pre-eclamptic toxæmia (PET) occurred in 90(6%) patients. Hypertension alone was present in 152 (10.13%) and oedema of feet alone in 152 (10.13%). Five women developed eclampsia. Women with Haemoglobin less than 11g numbered 299 (19.9%), and those with urinary tract infection 233 (15.5%). Thirty patients (2%) were allergic to some drug, mostly penicillin.

One hundred and ninety one (12.7%) came in with already ruptured membranes and in 216 (14.4%) they were leaking. Minor degree of abruptio placntae occurred in only two patients (0.66%). No case of placenta praevia was noted in the entire series. Only 8 of these primigravidae had urinary retention during labour necessitating catheterization.

Foetal dysmaturity (arbitrarily defined as birth weight of less than 2.5kg) was recorded in 85 (5.66%) babies. Postmaturity, defined as gestation period of more than 42 weeks, was encountered in 62 (4.13%) babies. Foetal distress was present on admission in 50 (3.33%) cases and it developed in another 28 (1.86%) later in the course of labour. Patients were not

tested for HbsAg, HCV and HIV antibodies as a routine; there was no history or suspicion of any sexually transmitted disease in any of these women.

RESULTS

Duration of Labour: Reckoned from the onset of labour pains, the average duration of labour was 15.5 hours. The average figures for first, second and third stage were 14 hours and five minutes, one hour and 17 minutes and 8 minutes respectively. One labour was very short (two hours) and another one even shorter (20 minutes). Labour was prolonged beyond 24 hours in 175 (11.6%) patients. Second stage exceeded 2 hours in 33 (2.2%) cases, and placenta was retained beyond half an hour in 8 (0.53%) cases.

Mode of Delivery: Vertex delivery took place in 1340 (89.3%). Vacuum extractor, low forceps and breech deliveries were 114 (7.6%). Sixteen patients had twin deliveries making an incidence of 1.07%. Tables I & II summarise different features of these cases. These primigravidae had been in labour for different length of time on admission. In 46 cases the foetal head was not engaged at the time of admission. Cord round the neck was found in 140 (9.2%) out of 1515 babies.

Perinatal Mortality: Twenty babies out of 1515 (1.32%) had died in utero before admission, and a further 5 (0.33%) intrauterine deaths occurred during labour. Three (0.20%) neonatal deaths raised hospital perinatal mortality to 28 (1.85%).

Maternal Outcome: There was no maternal mortality in this series. Postnatal follow up was

Table II: Assisted Vaginal Deliveries (n=144)

Type of Delivery	Number	Percentage
Vaccum extraction with episiotomy	80	55.5
Low forceps with episiotomy	07	0.49
Breech delivery with episiotomy	57	39.6

There were 16 twin deliveries amongst 1500 primigravidae i.e. 1.07%.

not possible in majority of cases, hence the lack of information about morbidity.

Foetal Outcome: Of the 1516 babies one of a pair of twins was born at home and was not brought with the mother. Foetal gender was recorded in 1514 cases, being 815 (53.83%) males and 699 (46.17%) females. Dysmaturity (defined as birth weight under 2.5kg) and post-maturity (gestation age over 42 weeks) were recorded in 85 (5.61%) and 62 (4.10%) of the babies respectively. The average birth weight was 3.08kg. Apgar scores at birth were 10/10 in 1069 (70.56%), 9/10 in 184 (12.15%) and 2-8/10 in 233 (15.4%).

Resuscitation: Of 1506 babies whose record was available only 122 (8.1%) required some sort of resuscitative assistance such as airway suction in 105 (6.97%), Oxygen administration in 27 (1.8%) and intubation in 13 (0.86%) cases. Five (0.33%) babies were referred to the Neonatal Department of a tertiary care hospital. Their fate, however, had not been ascertained.

DISCUSSION

Unencumbered with I.V. lines and foetal monitors, the women in natural labour are

Table-I: Normal Vagina Deliveries (n=1340)

Type of Delivery	Number	Percentage
Normal Vaginal Delivery with Episiotomy	136	10.1
Normal Vaginal Delivery without Episiotomy or tear	808	60.3
Normal Vaginal Delivery with small laceration	73	5.4
Normal Vaginal Delivery with first degree tear	244	18.2
Normal Vaginal Delivery with second degree tear	79	5.9
Third degree tear as extension of episiotomy	1	0.07
Fourth degree tear	Nil	

Cervical tears occurred in 6 (0.4%) patients out of 1500.

Table-III: Incidence of major complications of labour in the entire group (n=1500)

<i>Type of Complication</i>	<i>Number</i>	<i>Percentage</i>
Postpartum hemorrhage	19	1.27
Hemorrhagic shock	1	0.07
Retained placenta	8	0.53

Only one patient required blood transfusion.

ambulant most of the time and have shorter labours than those who are partially ambulant or who rest in bed most of the time.^{1,2} This impression is supported by the 15.5 hour's average duration of labour in our series. A study of 1241 women who had elective induction of labour and another 10608 women who went into labour spontaneously, induction was found to increase the rate of epidural anaesthesia, Caesarean section and "non-reassuring" foetal heart rate patterns.³

In another study the results of 122 women electively induced were compared with 122 women who underwent spontaneous labour. It was observed that pain relief, fetal scalp blood sampling and operative deliveries were recorded more frequently in the electively induced labour. Caesarean section rate was 15 times higher in the induced group.⁴ Induction rate was low in our series so and was the Caesarean section rate (4.7%), while the over all Caesarean section rate currently in the U.K is 21%.⁵

Artificial rupture of membranes in the first stage of labour seems to shorten the labour but it also increases the risk of infection in the mother and foetus. Our restrictive approach to episiotomy was rewarded in the form of intact perineum in 60.3% women. Additional benefits included the absence of pain, urinary retention, additional blood loss, infection, haematoma and infection of wound.⁶

While avoiding episiotomy, a certain number of perineal tears are bound to occur. In our series majority of these tears were either small lacerations not requiring repair, or first degree tears which are minor injuries as compared

to episiotomy. There was only one third degree tear complicating an episiotomy and no fourth degree tears. These major tears are the common complications of median episiotomy. Incidence of cervical tear was also low in our series (0.44%).

Oxytocin, Methergin and their combination, Syntometrin, as well as Prostaglandins are widely used to shorten the third stage of labour and to minimize blood loss. In a group of 5 studies, active and expectant management of the third stage was compared to assess the effects on blood loss, postpartum haemorrhage and other maternal and perinatal complications. It was concluded that routine active management was superior to expectant management in terms of blood loss, postpartum haemorrhage and other serious complications of the third stage of labour. Active management was, however, associated with an increased risk of unpleasant side effects (e.g. nausea and vomiting) and hypertension where ergometrine was used.⁷

Another study was made to test the hypothesis that active management of third stage of labour lowers the rate of primary postpartum haemorrhage (PPH) and longer term consequences compared with expectant management. The rate of PPH was significantly lower with active than with expectant management, being 6.8% in 748 patients and 16.5% in 764 patients respectively, but there was more vomiting in the active group.⁸

The reported incidence of postpartum haemorrhage is between 3.7 and 8.6%.⁹ Long labours augmented with Syntocin (Oxytocin) predispose to postpartum haemorrhage due to uterine atony after delivery of the placenta.⁵ In our series PPH occurred in 1.2% of deliveries. The amount of blood loss was not accurately measured and was assessed visually as an approximate figure.

If by compulsion rather than by choice, we used no modern gadgets for monitoring foetal wellbeing; still the perinatal mortality (1.8%) was low visa-a-vis the prevailing rate in a developing country.

CONCLUSIONS

Natural labour is a mother-and baby-friendly mode of arrival. Nature herself has tested it over millions of years in thousands of species in diverse circumstances. The results, in terms of maternal and foetal well being and economical burden are satisfactory. Even today, we feel, it gives the mother great confidence in her motherhood, and an uplifting sense of achievement to immediately cuddle her accomplishment with little or no help from hi-tech paraphernalia.

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