Original Article

An Attempt at Natural Delivery in 1500 Afghan Primigravidae

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Abstract

Objective: To assess the advantages and disadvantages of Natural labor.

Study Design: An open observational study

Duration of study: January, 2003 to July, 2006.

Place of Study: Mercy Teaching Hospital, Peshawar Pakistan.

Methodology: 1500 Afghan Primigravidae were included in the study. Only patients with singleton cephalic pregnancies at 37 weeks of gestation or above were studied. Induction by medical or surgical methods (artificial rupture of membranes) was done, only when medically indicated. Use of oxytocics and episiotomy was similarly avoided.

Results: Normal vaginal delivery occurred in 92.04% and operational deliveries in 7.06% cases. Episiotomy was performed in 9.06% of normal vaginal deliveries. The average duration of total labour was 12 hours. Postpartum haemorrhage occurred in 1.2% cases.

Conclusion: Natural labour under proper supervision is as safe as active labour. The added benefits are reduced cost, reduced perineal trauma and patients pride in her fortitude.

Keywords: Primigravidae, induction, episiotomy, Oxytocics

Introduction

Childbirth has been a normal physiological phenomenon for the mammalian female since time immemorial. The human female must have been her own midwife, most of the time in the early stages of human history. Labour in the vast majority of women proceeds safely for the mothers and their babies. Even today there is no concept of a midwife in many villages of the third word. An older woman in the house or the one next door acts as a birth attendant and who at the same time, provides immense moral support and emotional comfort. Noninterference, especially the avoidance of pelvic examination, prevents pelvic infection. However, some antenatal, intranatal or postnatal abnormalities/ complications (maternal or foetal) may necessitate special measures or intervention, at times.

Steady progress in biosciences, medical technologies and pharmaceutical innovations, where available, have strikingly reduced maternal as well as foetal mortality and morbidity.

These measure, despite their undisputed benefits, can be and are being misused in places where caution is lacking because of non-accountability or over-accountability. In this series of 1500 primigravidae we have persued a policy of minimal and absolutely unavoidable intervention. Most labours proceded naturally and the outcome was gratifying.

Methodology

This prospective study comprises 1500 refugee primigravidae (primies) who delivered in Mercy Hospital, Peshawar Pakistan. Over a period of about three and a half years from 1st January, 2003 to 30th July, 2006. All these mothers had singleton pregnancies with cephalic presentation and a gestation period of 37 weeks or more. Most of them came in established labour but labour was induced in some for medical or obstetric reasons. Detailed history was recorded in each case by a member of the medical staff. Haemoglobin estimation, routine urine examination. ABO and Rh (D) Blood Groups, HBsAg and HCV antibody were the basic tests performed on every patient.

Shaving of pubo-perineal hair is a religious obligation of all adult Muslims and all Muslim women in labour have already shaved the region. Muslim practice and specially Afghan culture do not allow the presence of a male attendant with the labouring women; even husbands do not stay with their wives in labour. A female relative or friend attends to the psychological comfort and some of the physical needs of the patient during the first stage of labour. No analgesics, anaesthetics or psychotropic drugs were given for controlling the pains of labour.

Local anaesthesia was used only for the repair of episiotomy or perineal tears. Vast majority of these patients with their cultural conditioning bore the labour pains with fortitude and without fuss. Ambulation was encouraged during the first stage. They were allowed to rest in any position they found comfortable. Oral intake of fluids was allowed till late in the first stage in low risk patients. During the second stage patients were transferred to the labour room and were delivered in supine position. Induction of labour was resorted to for medical or obstetric indications, such as in some cases of antepartum haemorrhage (APH), pre-eclamspia (PE), hypertension, postmaturity (over 42 weeks of gestation), foetal abnormality, leaking or ruptured membranes without uterine contractions or foetal death. Oxytocin was the usual agent employed for induction. Prostaglandins were prohibitively costly for most of these patients. Induction did not include artificial rupture of membranes except in cases of foetal distress or APH. In normal cases membranes were allowed to rupture spontaneously.

Episiotomy was avoided as far as possible except in operative vaginal delivery, imminent perineal tear or foetal distress; when performed it was always mediolateral. Spontaneous expulsion of placenta was awaited without giving oxytocics in the

third stage except in cases of postpartum haemorrhage. Brandt Andrews method was occasionally used to complete the third stage.

Age was recorded in 1485 (99%) of these 1500 primies. In the absence of written record, the exact age is not always known in Afghan women. However a reasonably accurate estimate of a patient's age is made by ascertaining the length of time she has been married, the gap between marriage and menarche and the age at menarche.

Blood pressure was recorded, blood sugar and haemoglobin estimation were done.

ABO blood groups and Rh (D) factors were determined in 1481 (98.73%) cases. Period of gestation was known in 1139 (75.93%) cases and estimated approximately in 361 (24.07%). However, even those in the latter group were fairly certain of being "at term". The vast majority of Afghan women accurately remember their L.M.P. (last menstrual period) in terms of lunar months and that gives a reliable figure of days for the period of gestation.

Results

The average age of these 1485 patients was 23.06 years at the time of delivery. Teenagers (13.19 years) numbered 136 (9.2%). Nineteen mothers (1.3%) were 30 to 35 years old and the same number (19/1485) were 36 to 40 years of age.

Duration of married life was known in 1432 (95.5%) cases and they had been married for an average period of 1.74 years. Only 48 patients (3.35%) had conceived after more than two years of married life. Height had been recorded in 1497 (99.8%) and averaged 155.5cm. Those shorter than 150 cm numbered 169 (11.30%). The average weight of 1485 (99%) patients was recorded 59.8kg.

High blood pressure (130/90 or over) was found in 123 (8.3%) of 1489 (99.3%) patients whose BP records were available of these 1489 patients, 100 (6.7%) had pre-eclampsia (PE) and 2 (0.13%) went into eclampsia.

Diabetes was remarkable for its rarity, being present in only one of these 1500 patients. Haemoglobin (Hb) concentration of less than 11 g/dl was recorded in 283 out of 1253 cases (22.6%). In 91 (7.3%) the Hb measured less than 10 g/dl. Postmature delivery (over 42 weeks) took place in 64 (4.26%) women.

Modes of delivery are summarized in figure 1 This series included only primigravdae who delivered singleton, cephalic babies vaginally.

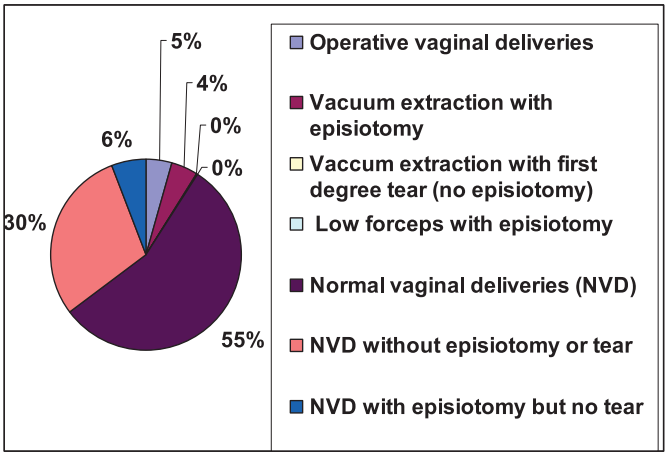

Figure 1. Mode of deliveries in 1500 primi gravidae

Practically half of these patients, i.e. 736 (49.07%), went home with intact perineum. Com-

plications of normal vaginal deliveries of 1500 are shown in figure 2. Minor perineal tears occurred in 424(28.27%) and cervical tears in 18 (1.2%).

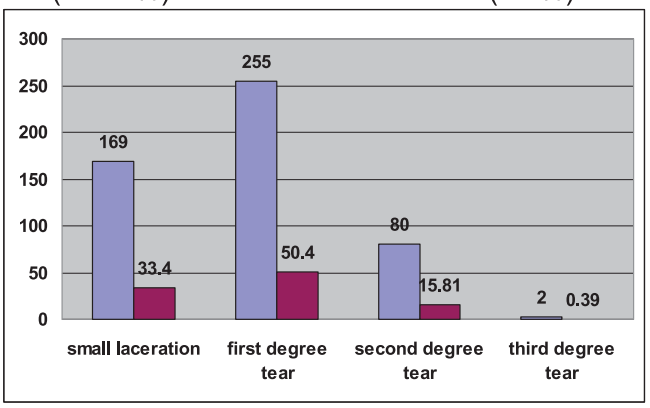

Figure 2. Complications of normal vaginal deliveries out of 1500

Mode of Delivery and maternal trauma in 1500 primies is shown in table 1

Table I. Mode of Delivery And Maternal Trauma in 1500 Primigravidae

Total deliveries 1500		Number	Percentage
A:	Operative vaginal deliveries	114	7.6
1.	Vacuum extraction with episiotomy	111	97.37
2.	Vacuum extraction with first degree tear (no episiotomy)	2	01.75
3.	Low forceps with episiotomy	01	0.87
B:	Normal vaginal deliveries (NVD)	1386	92.4
1.	NVD without episiotomy or tear	736	53.1
2.	NVD with episiotomy but no tear	144	10.39
3.	NVD without episiotomy but tear	506	36.51
	a. with small laceration	169	33.4
	b. with first degree tear	255	50.4
	c. with second degree tear	80	15.81
	d. with third degree tear	2	0.39
	e. with fourth degree tear	Nil	Nil

The average length of different known stages of labour is depicted in table II.

Table II. Average Length of Stages of Labour

Stage of labour	No of patients	Average duration	
		Hrs	Min
Total labour	1492	12	39
Second stage	1476	00	43
Third stage	1465	00	08

The resuscitative measures employed in 151 (10.07%) babies are listed in figure. 3

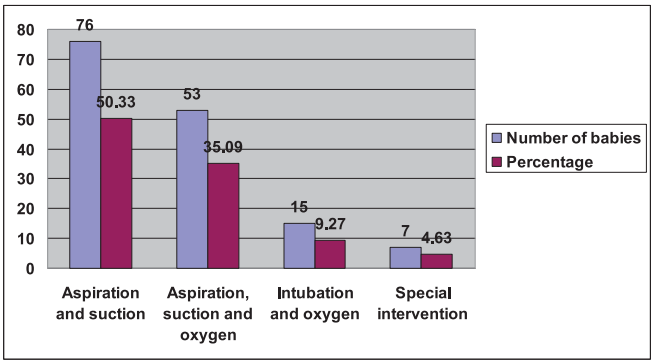

Figure 3. Type of Resuscitative Measures carried out in 151 Babies.

Discussion

Active labour is in vogue these days, especially in developed countries. It is in fact an attempt to expedite the labour. The components of active labour are induction of labour, artificial rupture of membranes, episiotomy and use of oxytocics in the third stage.

Induction: Induction of labour is currently one of the fastest growing medical procedures in the USA.[1,2] It is useful in the management of post-term (or postmature) pregnancy, some cases of antepartum haemorrhage (APH), foetal abnormality, foetal death and in expediting delivery when some complication endangers the mother or the feotus. However there has been an unexpected rise in the preterm birthrate even in singleton deliveries.[1] Although induction of labour has been practiced for many years[3], the procedure has been more widely used in recent years and the number of medications used for induction of labour has expanded greatly.[4] Induction in primigravidae and those with an unfavorable cervix has been associated with increased caesarean section (C.Section) rate.[5,6,7] Although induction of labour is generally considered to be safe,[5,6] it is not free from major risks, such as uterine rupture, particularly with previous C. Section[8,9], prolonged labour[10,11], chorioamnionitis[11], nuchal cord[12], foetal death[13] and cardiovascular complications.[4] The frequency of induction of labour varies in different hospitals, with different obstetricians, type of practice.[14,15]

In 4 studies of women of different parities the outcome was compared between induced and spontaneous labour. The results showed that the rates of epidural analgesia, vaginal instrumental delivery, caesarean section and PPH were higher in induced labour, and more babies had to be referred to special care units if the labour was induced.[16-21]

Birth certificate data for all USA births from 1989 to 1998 (when induction was attempted) shows that 17% of the induced labours ended up in C.[22,23] section. In this series of our patients an attempt was made to let the labour take its natural course as often, and as far, as safe for the mother and the foetus. Induction was employed entirely on medical or obstetrical grounds and not for social or economic reasons.

Membranes were not ruptured if there was no urgency to end the labour specially when the labour was well in progress with oxytocin (syntocinon) infusion. Needless to say that intact membranes provide sturdy safeguard against infection.

Foetal heart was checked regularly with ordinary stethoscope by the nurse or the doctor whose duty station was inside the delivery room.

Episiotomy: Episiotomy was a rare “last resort” intervention before 1920 and used only when the perineum was at extreme risk of rupture.[24] Subsequently its prophylactic and routine use became so common that in 1980 the rate was 63.9% in vaginal deliveries in the USA.[25] The value of episiotomy began to be questioned during the late 1970s and 1980s.[25-27] Studies during 1980s and early 1990s suggested that episiotomy was associated with a higher incidence of third and fourth degree lacerations, greater blood loss, risk of infection and increased postpartum pain, compared with no episiotomy.[28,29] Further studies failed to produce evidence that the liberal use of episiotomy prevented perineal trauma or pelvic floor laxity. It has been reported that episiotomy provided considerable protection from first and second de-

gree lacerations,[28,29] but it actually increased the likelihood of more serious third and fourth degree tears with consequent incontinence of stools and flatus. In fact episiotomy is a deliberate second degree tear, so its protective effect against first and second degree tear is an irrationality.

The practice of routine episiotomy has declined in the last two decades in the USA from 63.9% in 1980 to 39.2% in 1998.[25] Still many physicians continue to perform the procedure routinely. Episiotomy is employed in an estimated 35.2% of all vaginal deliveries in the United States and represents the most frequent type of surgery performed on the female population. This would appear difficult to justify in view of the available evidence.[30-32] Some observers have, in fact, gone so far as to characterize the continued, widespread use to the procedure as a form of violence against women.[33] The rate of episiotomy was reduced to 9.6% in our series Although it did increase the number of minor lacerations, second degree tears, which are the equivalent of episiotomy, were only 5.33%. Small lacerations most cases did not require suturing and healed quickly. The postnatal follow up of these primigravidae was unsatisfactory because the ones who heal well do not come for review due to social and financial problems. A very small number either became infected or healed poorly. The religious obligation of washing with water, the vulva, perineum and the anus after every act of micturition and defecation is an important factor in the prevention of infection.

Third Stage of Labour: The average length of third stage of labour has been reported as 8.3 minutes in a world health organization study[33] and 9 minutes in another study where misoprostol was used in both the studies.[21] Oxytocin and ergometrin are used more often than prostaglandins to shorten the third stage of labour and to minimize blood loss. The average length of third stage in our series was 7.8 minutes without the use of any oxytocic drug. Risk of CS: Its more with elective induction at term.[34]

Postpartum Haemorrhage: Postpartum haemorrhage (blood loss over 500ml) was recorded in 18 (1.2%) of our 1489 patients, which is lower than that reported in the literature (3.9%) for all vaginal deliveries.[35] In another study there were 335 cases of PPH of over 1000 ml in 6588 patients, an incidence of 5.1%.[36]

Cost: A USA-based study showed that the total hospitalization cost for women undergoing induction electively or for medical reasons was increased by 17.4% as compared with the cost of spontaneous labour.[37]

Conclusion

From this study of 1500 Afghan primigravidae the maternal and foetal outcome of natural labour appears to be at least as safe as that of active labour. It reduces the cost to the patients. An intact (or virtually intact) perineum is a source of joy to the young mother. A short hospital stay and minimal intervention also play role in the prevention of infection.

By avoiding elective induction and active labour, we believe we made a substantial saving for the patients and the hospital, as this policy made re-

sort to I.V infusions, oxytocics, sutures, needles and antibiotics unnecessary.

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