MANAGEMENT OF 3RD STAGE OF LABOUR: A COMPARISON OF DIFFERENT METHODS

BY

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M.S.

IN

OBSTETRICS AND GYNAECOLOGY

UNDER THE GUIDANCE OF

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Dr. Jwal Banker

ABSTRACT

Introduction:

The third stage of labor is the period following the completed delivery of the newborn until the completed delivery of the placenta and the membranes. Post partum hemorrhage (PPH) is the blood loss of greater than 500 ml following vaginal deliveries or 1000ml following cesarean section and is the leading cause of maternal mortality, accounting for about 35% of all maternal deaths. Even after the introduction various methods in the management of third stage of labour, the incidence of PPH is on the rise; the cause of which is still not clear. This study was done to assess all the methods in management of third stage of labour and find out the effects of each method so we can apply it in our daily practice.

Materials and Method:

After obtaining permission from the ethics committee of the institution, this study was carried out in the Obstetrics and Gynaecology department of Dhiraj Hospital, Pipariya. 200 low risk patients, who fit in the study criteria, were selected and randomly divided into 4 groups by chit method for the management of third stage of labour.

Group A included patients who received expectant management,

Group B patients received Inj. Oxytocin 10 IU IM at the time of delivery of the anterior shoulder of the baby,

Group C patients received Inj. Oxytocin 10 IU IM after the delivery of the baby and

Group D patients received Inj. Oxytocin (10 IU diluted in 20 ml NS) in the umbilical vein after clamping the umbilical cord.

Data was collected and analysed and results were made.

Results:

All the groups were comparable in terms of factors like age, parity, booking status, hemoglobin level at the time of admission and fetal weight. We observed that there was an increase in the mean post delivery pulse rate in Group A (p – 0.0001) and Group D (p – 0.024). There was no statistical difference in the mean pre and post delivery blood pressure in any groups (p > 0.05). All the groups were comparable in terms of duration of second stage of labour. The duration of third stage of labour was significantly more in Group A compared with all other groups (p – 0.0001). The PPBL was also significantly more with Group A compared with all other groups (p - < 0.05) and all the other groups were comparable. Total incidence of PPH was 8 in 200 patients (4 %), of which 6 (75 %) were from Group A and 2 (25 %) from Group D. All patients with PPH had to be given blood transfusion. The incidence of retained placenta was 4 in 200 deliveries (2 %) of which 3 (75 %) were from Group A and 1 (25 %) from Group B.

Conclusion:

We found out that the best method in the management of third stage of labour was Inj. Oxytocin 10 IU IM after the delivery of the baby; but in the hands of a skilled obstetrician who is aware of the complications, Inj. Oxytocin 10 IU IM at the time of delivery of the anterior shoulder of the baby may be equally effective.

Key Words:

Third stage of labour

PPBL (post partum blood loss)

PPH

Retained placenta

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INTRODUCTION

"Motherhood is priced Of God, at price no man may dare, to lessen or misunderstand."

~Helen Hunt Jackson

Taj mahal - One of the Seven Wonders of the World. One of the greatest monuments, dedicated to the memory of Queen Mumtaz, who died after her last childbirth of postpartum haemorrhage in 1630 – is a testimony to grim reminder of the tragedy of maternal mortality that can befall any woman in childbirth.(1)

The third stage of labor refers to the period following the completed delivery of the newborn until the completed delivery of the placenta.(2)

These first few moments of their Childs' life are an important time for the parents, but this is also a period during which some women are at a risk of major hemorrhage.(3)Relatively little thought or teaching seems to be devoted to the third stage of labor compared with that given to the first and second stages. A leading North American obstetrics text devotes only 4 out of more than 1500 pages to the third stage of labor but significantly more to the complications that may arise immediately following delivery.(4)

One respected author states: "This indeed is the unforgiving stage of labor, and in it there lurks more unheralded treachery than in both the other stages combined. The normal case can, within a minute, become abnormal and successful delivery can turn swiftly to disaster."(5)

The length of the third stage itself is usually 5-15 minutes. The absolute time limit for delivery of the placenta, without evidence of significant bleeding, remains unclear. Periods ranging from 30-60 minutes have been suggested.

Post partum hemorrhage (PPH) is the loss of greater than 500ml blood following vaginal deliveries or 1000ml blood following cesarean section . Postpartum haemorrhage (PPH) is the leading cause of maternal mortality, accounting for about 35% of all maternal deaths.(6)

Every year about 14 million women around the world suffer from PPH. (7)

The risk of maternal mortality from haemorrhage is 1 in 1000 deliveries in developing countries (100 per 100 000 live births). Most deaths (about 99%) from PPH occur in low- and middle-income countries compared with only 1% in industrialized nations.(8)

However, recent studies have shown an increase in the incidence of PPH in developed countries as well. (9)

Therefore, in order to reduce the MMR and achieve MDG5, it is essential to achieve a major reduction in the incidence of PPH.

PPH may cause anemia or lead to poor iron reserves, ultimately contributing to anemia. Anemia may cause weakness and fatigue and increase morbidity of the patient. Hospitalization may be prolonged, and the establishment of breastfeeding may be affected, thus affecting the baby. A blood transfusion may ameliorate the anemia and shorten the hospital stay, but it carries risks of transfusion related reaction and infection. Access to safe blood is not universal, especially in developing countries like India and PPH can sometimes strain the resources of the blood bank.

Severe PPH, retained placenta, and uterine inversion may require emergency anesthetic services. Any exploration or instrumentation of the uterus increases the risk of sepsis.

Traditionally, expectant management was used which implies a hands - off approach – i.e. waiting for the signs of separation of the placenta and its spontaneous delivery and late cord clamping (clamping the umbilical cord when pulsation in the cord has ceased) and then cutting it.

Since 2007, WHO recommendations have supported active management of the third stage of labour (AMTSL) as a critical intervention for PPH prevention.

Active Management: Administration of a uterotonic agent, early cord clamping and cutting, controlled cord traction to deliver the placenta and uterine massage following delivery of the placenta.

Different routes and timings of administration of uterotonic agents have been suggested by authorities.

- The WHO AMTSL guidelines 2012 suggests the use of Inj oxytocin 10 IU IM after the delivery of the baby.
- The NICE guideline on intrapartum care (2014) makes the following recommendation "For active management, administer 10 IU of oxytocin by intramuscular injection with the birth of the anterior shoulder or immediately after the birth of the baby and before the cord is clamped and cut."
- ACOG suggests the use of inj oxytocin 10-40 IU IV diluted in 500-1000 ml of NS at 500ml/hr after delivery of the baby.

- FOGSI recommends administration of uterotonic agent (preferably Inj oxytocin 10 IU IM or 5 IU diluted in 500 ml NS or RL IV) within one minute of the delivery of the baby, after ruling out the presence of second fetus.

Even after the introduction of these many methods, the incidence of PPH is on the rise. The cause of which is still not clear.

This study was done to assess all the methods in management of third stage of labour and find out the effects of each method so we can apply it in our daily practice.

AIM AND OBJECTIVES

AIM

To evaluate methods like expectant management, Inj. oxytocin IM at the delivery of the anterior shoulder of the baby, Inj. oxytocin IM after the delivery of the baby & intra umbilical vein oxytocin (10 IU diluted in 20 ml NS) after clamping the umbilical cord in the management of 3rd stage of labour and to find out the best method in the management amongst them.

OBJECTIVES

- To use the methods allotted to specific groups in managing the third stage of labour
- To know effectiveness by measuring various parameters like
    - Pre delivery and post delivery vitals
    - Blood loss after delivery of the placenta (PPBL)
    - Duration of 3rd stage of labour
    - Retention of placenta
    - Occurrence of Post Partum Hemorrhage
    - Use for blood transfusion.
    - Others as mentioned in the proforma.
- To compare the result by analyzing the data.

REVIEW OF LITERATURE

BACKGROUND

The third stage of labour

The third stage of labour starts immediately after the baby is born, includes detachment of the placenta from the uterine wall and ends with the complete expulsion of the placenta and membranes. It usually lasts 5–15 minutes but any period of up to one hour may be within normal limits. [10]

The contractions during the third stage of labour are generated by higher levels of oxytocin than before delivery, levels that remain significantly increased for up to 45 minutes after delivery, coinciding with the expulsion of placenta.[11]

The detachment of the placenta occurs in two different ways; in the majority of cases separation starts in the centre of the placenta, which descends foremost. The fetal surface emerges initially, with the membranes following, and there is very little or no visible bleeding. Less common is separation starting at the lower edge of the placenta that slips down sideways, the maternal surface visible first in the vagina. The latter is a slower separation and haemorrhage is also likely to be more abundant.[10]

A prolonged third stage of labour has traditionally been defined as one lasting greater than 30 minutes. This definition is based on a 1991 report that demonstrated risks of maternal morbidities, including postpartum haemorrhage and the need for blood transfusion, began rising after duration of the third stage exceeded 30 minutes. [12]

Prolonged third stage of labour, requiring manual placenta removal, increases the risk of PPH more than three-fold and is more common in preterm labour, augmented

labour and nulliparity.[13]

Retained placenta is a major cause of PPH, although the definition of prolonged third stage remains controversial. Some authors suggest that if the placenta is not delivered within 30-60 minutes, as in 2-3% of all deliveries, the third stage is prolonged.[14]

Retained placenta can be defined as lack of expulsion of the placenta within 30 minutes of delivery of the infant.[15, 16]

The World Health Organization suggested that one should take into account the gestational age at delivery and how the third stage of labor is managed. In part for these reasons, WHO concluded that the length of time before making a diagnosis of retained placenta should be "left to the judgement of the clinician"[17]

Postpartum haemorrhage

PPH, one of the complications of childbirth, is causing concern among health care providers because of the rapidity of its onset and the danger it can pose to women giving birth. As described earlier, PPH is defined as blood loss of ≥500 mL and severe PPH is defined as blood loss of ≥1000 mL.

Maternal blood volume increases during pregnancy and the average increase is about 40-45% at term. This hyper-volaemia has several important functions, among which is safeguarding the mother against the adverse effects of blood loss during the third stage of labour.[18, 19, 20]

Although the blood volume increase compensates for third-stage blood loss, action should be taken when a woman has lost more than one third of her estimated blood volume or 1000 mL, or when there is a change in her vital signs. According to a

literature review, it is important to recognize the clinical symptoms of various degrees of hypo-volaemia and rapidly identify the cause of PPH. The clinical findings in hypo-volaemia and various degrees of shock are listed in figure 1.[21]

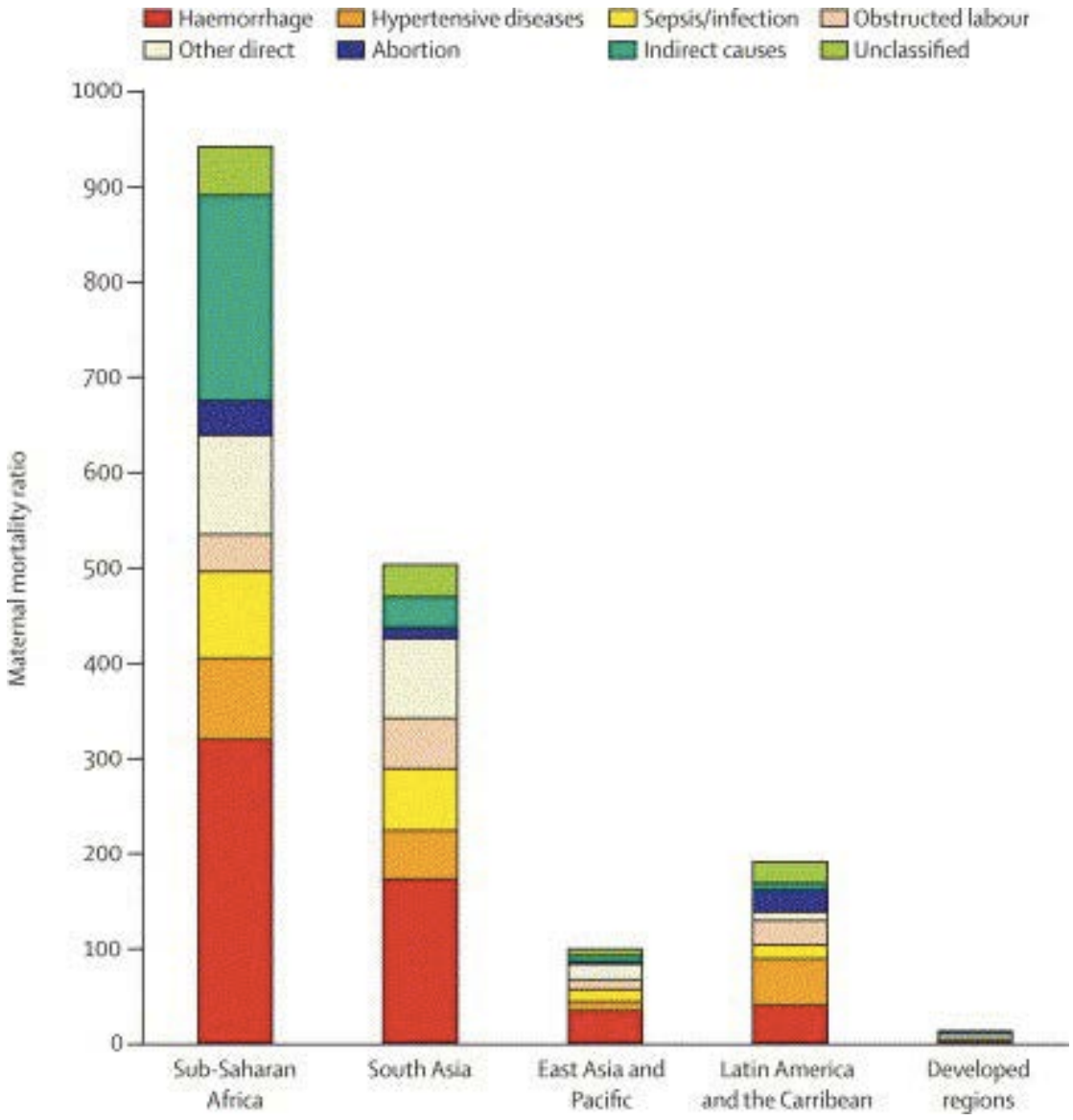
Clinical findings in hypovolaemia and shock (from Ramanathan & Arulkumaran 2006, p. 969)

Blood volume loss	BP (systolic change)	Symptoms and signs	Degree of shock
500–1000 mL (10–15%)	Normal	Palpitation, tachycardia, dizziness	Compensated
1000–1500 mL (15–25%)	Slight fall (80–100 mm Hg)	Weakness, tachycardia, sweating	Mild
1500–2000 mL (25–30%)	Moderate fall (70–80 mm Hg)	Restlessness, pallor, oliguria	Moderate
2000–3000 mL (35–45%)	Marked fall (50–70 mm Hg)	Collapse, air hunger, anuria	Severe

One-quarter of annual maternal deaths are probably caused by PPH, which together with pre-eclampsia and sepsis is the most frequent cause of maternal death. Direct and indirect causes of maternal death are demonstrated in Figure 2.[22]

Figure – 1 MMR in 2000 by medical cause and region.

(From Ronsmans et al. 2006, p. 1193).

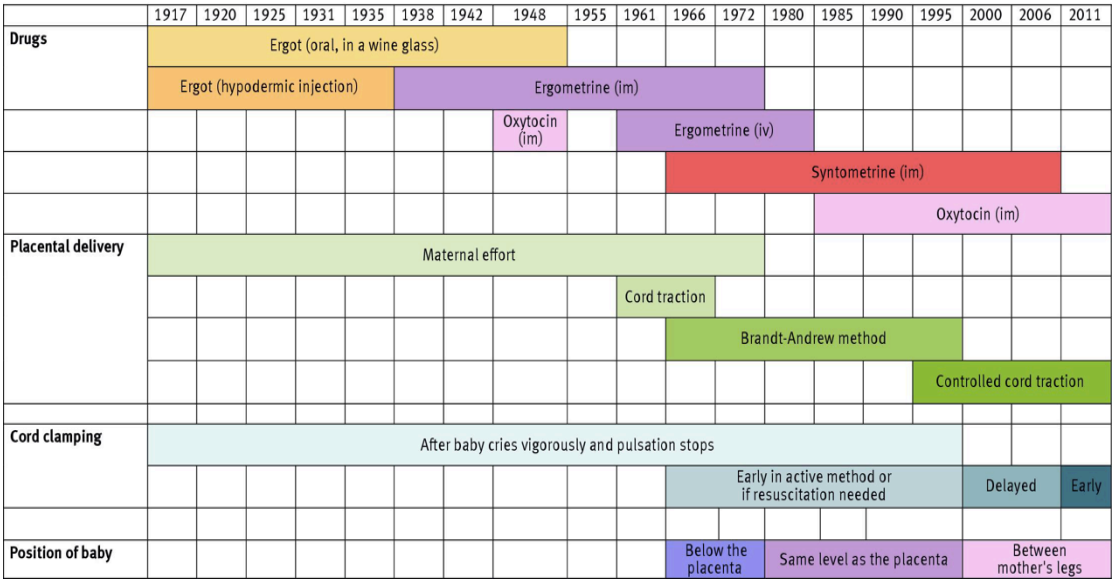


Almost all of these maternal deaths are preventable, as the medical remedies to avoid fatalities are well known. PPH is also connected with severe morbidity and long-lasting health problems such as anaemia. Women living in an affluent setting with access to high-quality medical care will probably survive a major haemorrhage. This is not the case for poor, malnourished and unhealthy women living in areas with risks for delay in recognition of PPH, delay in transport to hospital and insufficient

treatment at the health facility.[23]

An article published by Nasreen Aflaifel et al showed 100 years of changes in the management of the third stage of labour.[24]

Figure – 2 100 years of changes in the management of the third stage of labour



Assessment of blood loss

It is well known that visual estimation of blood loss in the third stage of labour and post partum is inaccurate and inconsistent. However, it is the most rapid and easiest way to judge the quantity of bleeding. Several studies have reported that care providers underestimate blood loss by 30 – 50% and it has also been stated that the greater the loss, the greater the underestimation [25, 26, 27, 28]

It has been suggested that blood loss during the third stage should be assumed to be double the visual estimate if the latter exceeds 500 mL.[29]

Direct measurement by collecting blood in buckets, sanitary pads and towels is the oldest method for attempting to determine the quantity; however, the amount of other,

intermingled fluids cannot be distinguished, rendering the estimate uncertain [30]

Patel et al reported that visual estimation was less accurate than estimationby placing a plastic drape under the mother's buttocks immediately after thebirth of the neonate[31]

Laboratory methods such as photometry yield a more precise measure of blood loss and have been used in the post partum period. Photometry involves different technologies, one of which is converting blood pigment tovalkaline haematin. This method is the most precise one, albeit too difficult and expensive to use in clinical practice [30, 32]

An estimate of blood loss can also be derived by multiplying the calculated pregnancy blood volume by percent of blood volume lost and comparing the visual estimated blood loss with the calculated estimated blood loss and the pre- and post-delivery haematocrit (HCT) [33]

In India, Kelly's pad had been used to collect the blood and then measure it in a measuring flask.

Some authors have declared that the actual quantity of blood loss is less important and suggested that the classification of PPH should instead be related to whether the haemorrhage has physiological effects or threatens the woman's life [23]

Management of the third stage of labour

The approach to management of the third stage of labour should minimize serious negative effects; the main issue is the choice between EMTSL and AMTSL.[34]

Expectant management is a ’hands off’ approach, where signs of placental separation are awaited and the placenta is delivered spontaneously or with the aid of gravity, maternal pushing or, sometimes, nipple stimulation,[35,36]

Hence:

1. a prophylactic uterotonic agent is not administered;
2. ideally the umbilical cord is neither clamped nor cut until the placenta has been delivered but, as a minimum, caregivers have waited until cord pulsation has ceased; and
3. the placenta is delivered spontaneously with the aid of gravity and sometimes by maternal effort.[37]

AMTSL (previously abbreviated as AML or AMTL) includes

1) Clamping of the umbilical cord shortly after the birth of the baby,
2) Administration of a uterotonic agent and
3) Controlled cord traction (CCT) for delivery of the placenta. CCT entails waiting for a uterine contraction and then placing one hand just above the symphysis pubis. Firm backward counter- pressure is applied with the purpose of preventing inversion of the uterus. [10]

The discussion concerning whether AMTSL or EMTSL should be recommended started in the mid-18th century when Crede´s manoeuvre was introduced with the objective of accelerating the third stage. Crede´s manoeuvre includes grasping the fundus and squeezing out the placenta. However, the risk of placenta products remaining in utero associated with this method was discussed and the opponents proposed, “Hands off the uterus”. Dr Smyly at Rotunda Hospital in Dublin wrote one

of the first published articles on the management of the third stage of labour in 1885. He promoted a mixture of 'active' and 'expectant' management and suggested generating a permanent uterine contraction by holding one hand on the fundus, never letting the uterus relax before the placenta was expelled. He objected to pulling on the cord but did suggest strong downward pressure on the uterus to drive out the placenta[38]

In 1932 the `Brand Andrew's manoeuvre´ was introduced to shorten the third stage and facilitate placenta expulsion; this later became the CCT concept.[39, 40, 41]

After that, the WHO laid down the guidelines for active management of third stage of labour, which were modified in 2012 and is considered as the ideal method and is most commonly used everywhere.

Uterotonic drugs

Uterotonics have been known for more than a century. In the early twentieth century, there was a breakthrough in research on the pituitary gland, leading to the isolation and synthesis of oxytocin, for which Du Vignaud was awarded the Nobel prize in 1953.[40, 41]

Several studies have shown that administration of uterotonic drugs, especially as part of AMTSL, reduces the incidence of PPH. A meta-analysis of five RCT by the Cochrane Collaboration showed that AMTSL contributes to a reduction of prolonged third stage as well as reducing the incidence of PPH.

Different types of oxytocic drugs were used in the studies. Intramuscular administered oxytocin was exclusively used in one of the included studies, Syntometrine® (a combination of 5 IU oxytocin and 0.5 mg of ergot alkaloids) was used in two studies

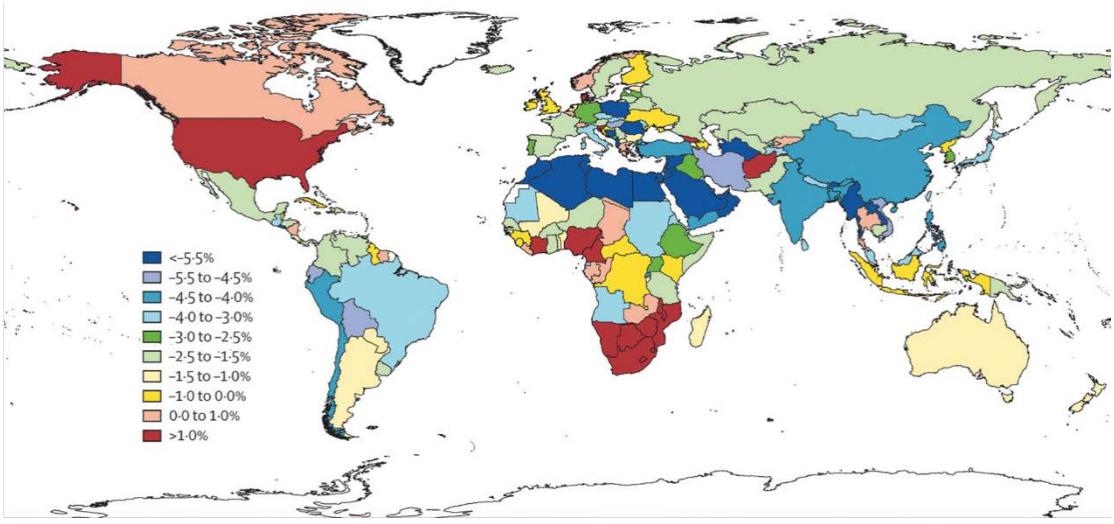
and ergot alkaloids were administered in one study. [42]

An earlier Cochrane review of the prophylactic use of oxytocics in the third stage of labour identified reduced blood loss and reduced need for further uterotonic drugs as benefits. There was a non - significant trend towards more manual removal of the placenta as well as an association with more raised blood pressure when ergot alkaloids were used, compared with oxytocin.[43]

It has been emphasized that once a uterotonic has been administered, it is important to deliver the placenta quickly in order to prevent retention. While oxytocin appears to be beneficial for prevention of PPH, there is not enough information about its side effects.[44]

Figure 4 shows the annual rate of decline in the MMR from 1990 to 2008.[45] The use of AMTSL is one of the main factors in the reduction.

Figure – 3 ***Annual rate of decline in the maternal mortality ratio, 1990-2008 (from Hogan et al. 2010, p. 1620).***



Umbilical (or intra-umbilical) vein injection (UVI, IUVI) for the treatment of retained placenta was first described by Mojon and Asdrubali in 1826.[46]

This technique allows the treatment to be directed specifically at the area with the contractile failure. In the early twentieth century, various authors reported on the use of umbilical vein injection of saline solution 0.9% with volumes that have varied widely between 200 mL and 400 mL.[47, 48]

Recent studies have concentrated on smaller volumes of umbilical vein injection of 0.9% saline solution plus oxytocin, although most of these were uncontrolled [49, 50, 51,52].

A Cochrane review of UVI of saline solution plus oxytocin concludes that the use of oxytocin via umbilical vein has little or no effect.[53]

Routine umbilical vein injection has been suggested as an alternative way of managing the third stage of labour, as it directs the treatment to the placental bed and uterine wall, resulting in an earlier uterine contraction and placental separation.[52]

The hydraulic effect of injected solution was also considered to contribute to placental separation by mechanical pressure.[54]

It also allows higher doses to be used, and a reduction of systemic side effects.

Balanced against this is a need for training in the technique and a possible higher cost of materials. There is a wide variety of UVI methods. The efficacy of any method will depend on the volume of fluid injected and the concentration of drug within that fluid as well as the rapidity of transfer of drugs across the placenta.[55]

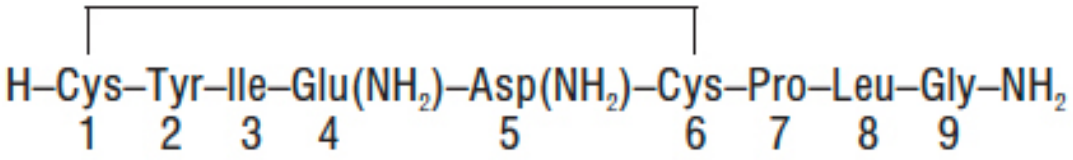
Umbilical vein injection allows the treatment to be directed specifically at the area with the contractile failure, whilst sparing the remainder. The objective is to deliver a solution (with or without the addition of uterotonic agents) directly to the retro-placental myometrium by injecting it into the placental bed via the umbilical vein.

Various methods of intra-umbilical vein injection have been proposed. Injection of oxytocin diluted in saline solution and injected directly into the umbilical vein is the method most commonly used in clinical trials.

Oxytocin

Oxytocin is a peptide hormone. Oxytocin is normally produced by the paraventricular nucleus of the hypothalamus and is released by the posterior pituitary.It plays a role in social bonding, sexual reproduction in both sexes, and during and after childbirth.[56] Oxytocin is released into the bloodstream as a hormone in response to stretching of the cervix and uterus during labor and with stimulation of the nipples from breastfeeding. [57] This helps with birth, bonding with the baby, and milk production. [57, 58] Henry Dale discovered oxytocin in 1906. [59] Its molecular structure was discovered in 1952. [60]

Its chemical formula is



Routes of administration include intra-muscular, intra-venous and intra-nasal.

Common side effects include hypotension, after pains, nausea and occasionally vomiting.

Evidence-based practice in the third stage of labour

In the 1970s, controlled trials evaluating various aspects of the third stage of labour started appearing in the medical literature. The two main concepts for management of the third stage, as well as different components of these two packages, were compared in RCT. Unfortunately, most of the comparative trials differed in some aspect of management, such as the dose, route, timing and choice of the uterotonic agent. According to several researchers, there is sufficient evidence to indicate that AMTSL should be implemented in preventing PPH.[61, 62]

This leads to a reflection on what is meant by 'evidence'.

The word 'evidence' is rooted in the concept of experience, relating to what is manifest and obvious. In health care, the concept of evidence has been interpreted in relation to ideas of proof and rationality. Clinical practice guidelines have been proposed to reduce the gap between available scientific evidence and clinical practice. The definition of evidence-based practice, according to Sackett,[63] is:

'The conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients'

Most research on the third stage of labour has been centered on determining which approach, AMTSL or EMTSL, is superior for prevention of PPH. As mentioned above, the ICM and FIGO (Joint Statement, 2004) recommend that AMTSL be offered to women since it reduces the incidence of PPH and this recommendation has been questioned by midwives and other supporters of normal childbirth who recommend that there should be a valid reason to interfere with the normal physiological childbirth process (WHO/FRH/MSM, 1996). [64]

What remains to be studied?

Previous studies of the management of the third stage of labour, all conducted in high-income countries, have compared different uterotonic drugs, in conjunction with AMTSL or EMTSL, with blood loss as the main outcome variable. [42, 43]

The variations observed in these trials also exist in clinical practice and there is thus still a need to identify the effectiveness of AMTSL as well as the mode and time of administration of the uterotonic agent.

REVIEW OF OTHER STUDIES

David H Chestnut et al conducted a study on the influence of umbilical vein administration of oxytocin on the third stage of labour. The study was conducted on 184 patients. 37 women received 10 units of oxytocin diluted in physiologic saline solution to a total volume of 20 ml and 41 women received 20 ml of saline solution alone. There was no significant difference in the mean injection – placental expulsion interval (9 versus 10 minutes; p value not significant). One woman in the oxytocin group and two women in the saline group required manual removal of placenta.[65]

In a randomized controlled trial done by Jane Rogers et al on active versus expectant management of the third stage of labour, 1512 women at low risk of PPH were included and divided into 2 groups. Group 1 included women who had active management of third stage and the other group had patients who were given expectant management. The average duration of third stage in the expectant group was 15 mins while in the group with active management was 8 mins. The mean blood loss in expectant group was 336.5 ml while in the other group it was 268.5 ml. The incidence of PPH in the expectant group was 16.5% while in the group with active management was 6.8% ($p < 0.0001$).[37]

In another study by Reddy VV et al, the use of umbilical vein injection of oxytocin was compared with traditional management of the third stage of labor. Pregnant women were randomized to receive intravenous oxytocin after the delivery of the placenta or oxytocin via the umbilical vein immediately after cord clamping. Those who received umbilical vein oxytocin had a shorter third stage of labor (4.1 versus 9.4 minutes; p - <0.0001), less measured blood loss (135 ml versus 373 ml; p - <0.02), and a lower drop in hematocrit (3.9% versus 6.2%; p - <0.01). Intraumbilical vein

oxytocin appears to be a useful alternative to traditional management of the third stage of labor. [66]

A double-blinded RCT done by Jackson KW et al on 1,486 women receiving active management of the third stage of labour was performed to more definitively isolate the effect of the timing of the uterotonic agent. 1486 participants were enrolled and randomized to receive prophylactic oxytocin either before (n = 745) or after (n = 741) placental delivery.

The early administration of prophylactic oxytocin did not increase the risk of manual removal of the placenta, and there was equal effectiveness in preventing postpartum haemorrhage. 7.5 patients in the first group (oxytocin before placenta delivery) and 9.7 patients in second group (oxytocin after placental delivery) had blood loss of >= 500 ml (p – 0.15). The blood transfusion incidence was 0.13 in first group and 0.27 in second group. The duration of third stage was 7.7 min in first group and 8.1 min in second group (p – 0.28). 2.4 patients in the first group and 1.6 patients in second group had retained placenta (p – 0.28). [67]

A population-based data from the 1994–2006 National Inpatient Sample in USA was used to identify women who were hospitalized with postpartum hemorrhage. Data for each year were plotted, and trends were assessed. Multivariable logistic regression was used in an attempt to explain the difference in PPH incidence between 1994 and 2006. The study showed that PPH increased by 26% between 1994 and 2006 from 2.3% (n = 85,954) to 2.9% ($P < .001$). The increase primarily was due to an increase in uterine atony. The increase in PPH could not be explained by changes in rates of cesarean delivery, vaginal birth after cesarean delivery,etc.[68]

In a study done by Keisuke Saito et al, a prospective study was done on 343 patients to compare intra muscular oxytocin to intra muscular ergometrine in prevention of PPH. The study showed that the use of intra muscular oxytocin was associated with a significant reduction in the mean total PPBL (288 ml versus 354 ml; p – 0.004) and a reduction in the frequency of PPH (>500 ml) (10.9% versus 20.3 %). There was no difference in terms of duration of third stage of labour or frequency of manual removal of placenta. They concluded that the routine use of intra muscular oxytocin was more effective than ergometrine in prevention of PPH.[69]

In a Cochrane review by Begley et al, 7 studies were used which involved 8247 women and compared effectiveness of active management vs expectant management of third stage of labour. Here in active management, oxytocin im was used at the delivery of the anterior shoulder of the baby in some patients and in some soon after the delivery of the baby. The results showed statistical reduction in the occurrence of severe PPH (>1000 ml blood loss) (p – 0.08), reduction in primary blood loss >500 ml (P – 0.23) and maternal blood transfusion during the third stage of labour or after delivery (p – 0.47). There was no significant difference in the duration of third stage of labour or rate of manual removal of placenta.[42]

Olufemi T Oladapo et al did an intervention review on intramuscular versus intravenous prophylactic oxytocin for the third stage of labour. They concluded that there is no evidence from randomized trials to evaluate the comprehensive benefits and risks of intramuscular and intravenous oxytocin when given to prevent excessive blood loss after vaginal delivery. More trials with adequate design and sample sizes should be done.[70]

Emire Oguz Orhan et al did a prospective randomized trial of oxytocin administration for active management of third stage of labour. 600 women were recruited into 4 groups. Group A included patients who were given oxytocin intravenously after the delivery of the baby, Group B included patients who were given oxytocin intravenously at the time of delivery of the anterior shoulder, Group C patients were given oxytocin intra muscular after delivery of baby and Group D included patients who were given oxytocin intra muscular at the delivery of anterior shoulder. The mean PPBL did not differ significantly between the groups (p – 0.134) and there was no significant difference in the incidence of PPH amongst the groups (p - 0.738). In the subset of patients who did not received labour augmentation, the PPBL was significantly lower in group B as compared to other groups (p – 0.019).[71]

In a study done by Sakineh Mohamadian et al in 2013 on the effect of timing of IM oxytocin injection on maternal bleeding in third stage of labour, 100 patients with gestational age of 38-42 weeks were selected. In the study group, oxytocin was given with the delivery of anterior shoulder of the fetus and in the control group, oxytocin was given after delivery of the placenta. The study showed that there was no significant difference in the blood pressure and pulse rate before and after the delivery in any groups. The PPBL in both the groups also showed no statistical difference. They concluded that the timing of oxytocin administration did not have an effect on the third stage of labour, but oxytocin after placental delivery was safer. [72]

Antonina I. Frolova et al did a research on the duration of third stage of labour and the risk of post partum haemorrhage. A secondary analysis of a cohort of 7,121 women who had a vaginal delivery at or beyond 37 weeks 0 days of gestation was done in Missauri. The mean duration of the third stage of labor among women who had a

vaginal delivery was 5.46 (standard deviation 5.4) minutes and median duration was 4 minutes. Women with a third stage above the 90th percentile (>9 min) (n=5705) had an increased risk for postpartum hemorrhage compared with a third stage below the 90th percentile (13.2% compared with 8.3%; adjusted odds ratio [OR] 1.82, 95% confidence interval [CI] 1.43–2.31). They concluded that the risk of PPH increases when the duration of third stage of labour is 20 min or more and so they suggested that the definition of prolonged second stage of labour might be outdated.[73]

A randomized trial was conducted to know whether active management of the third stage of labour is as effective in reducing maternal blood loss among rural American Indian women. Retrospective data was collected on a cohort of largely multiparous American Indian women having singleton vaginal births at a rural hospital in 2000-2001, comparing measures of blood loss among women receiving active management (n=62) versus routine (n=113) management of the third stage of labour.Active management was associated with reduced maternal blood loss when compared to routine management. Compared to women who received routine management, women who received active management had 3 g/dl or greater postpartum hemoglobin level. The findings suggest that active management of the third stage is more effective in reducing maternal blood loss among rural American Indian women. [74]

A quasi-experimental study was conducted to assess the effectiveness of active management of third stage labour in preventing postpartum haemorrhage, active management of third stage of labour by injection oxytocin IM was introduced for all births attended by government midwives (at home, community, and district levels) in one district while standard practice without active management of labour was continued in three neighboring districts (with a 1:2 ratio of participants). A total of

3607 women participated in the study (1236 in the intervention district and 2371 in the comparison districts). Active management of third stage of labour was associated with reduced risks for prolonged third stage beyond 30 min and 34% reduction in PPH. This study supports the value of active management in reducing the incidence of postpartum haemorrhage and shortening the third stage of labour. [75]

MATERIALS AND METHOD

The present study is a prospective observational study.

All pregnant women admitted between February 2016 to January 2017, to the labour room of Dhiraj Hospital, a tertiary care centre situated in the rural area of Vadodara, and who fitted in the study criteria were selected for the study.

Selection of Patients:

200 low risks patients who fitted in the study criteria were allotted into different group by chit method.

PATIENTS WERE DIVIDED INTO 4 GROUPS:

Group A:

Patients of this group received the expectant management of the 3rd stage of labour.

Group B:

Patients of this group received 10 IU Oxytocin IM after the delivery of the anterior shoulder of the baby.

Group C:

Patients from this group received 10 IU Oxytocin im after the delivery of the baby.

Group D:

Patients of this group received intraumbilical vein oxytocin (10 IU of oxytocin diluted in 20 ml of normal saline) immediately after clamping the cord.

Patients who fulfilled the following criteria were included in the study.

INCLUSION CRITERIA

- All normal antenatal women in labour attending the labour ward of Dhiraj Hospital.
- Patients in labour with a normal pregnancy history and vertex presentation.
- Gestational age >30 weeks

EXCLUSION CRITERIA

High-risk cases like:

- APH
- PIH
- Polyhydramnios
- Parity more than 4
- Previous 2 Caesarean section
- Patients who had to be taken for caesarean section for any reason during labour
- Multi-fetal gestation
- IUFD
- Patients with severe anaemia
- Women with pre-existing cardiac diseases, diabetes and other systemic diseases.

Method

Detailed history & thorough clinical examination of each antenatal patient was carried out.

Data was collected as regards to age, parity, menstrual history, obstetric history, and different parameters of labour and fetal outcome.

Then routine antenatal investigations were carried out:

BG, CBC, RBS, Urine Routine and microscopic examination, HIV, HBsAg, VDRL, sickling.

The patient was made to lay down on the labour table in lithotomy position after placing a Kelly's pad beneath her perineum.

Pre delivery vitals of the mother were noted, which included pulse and blood pressure.

Constant monitoring of the labour was done and partogram was charted.

The delivery of the patients was conducted normally the the delivery of placentaby controlled cord traction in Groups B, C and D after the patients were given the treatment as per the group they were allotted to.

Time required for the duration of second and third stage of labour was noted with a stop watch.

First P/V examination was done at the time of admission, followed by time of rupture of membranes and then as needed to identify full dilatation of the cervix and the start of the second stage of labour. The duration of second stage of labour was calculated from that time till the delivery of the fetus.

The third stage of labour was measured from the time of delivery of the fetus to till complete removal of the placenta and the membranes.

Post Partum Blood Loss was measured by placing a kellys pad beneath the perineum of the patient and later measuring the collected blood by a calibrated measuring flask after draining the liquor.

Blood loss from episiotomy or tear site was stopped getting collected by covering episiotomy area with pads.

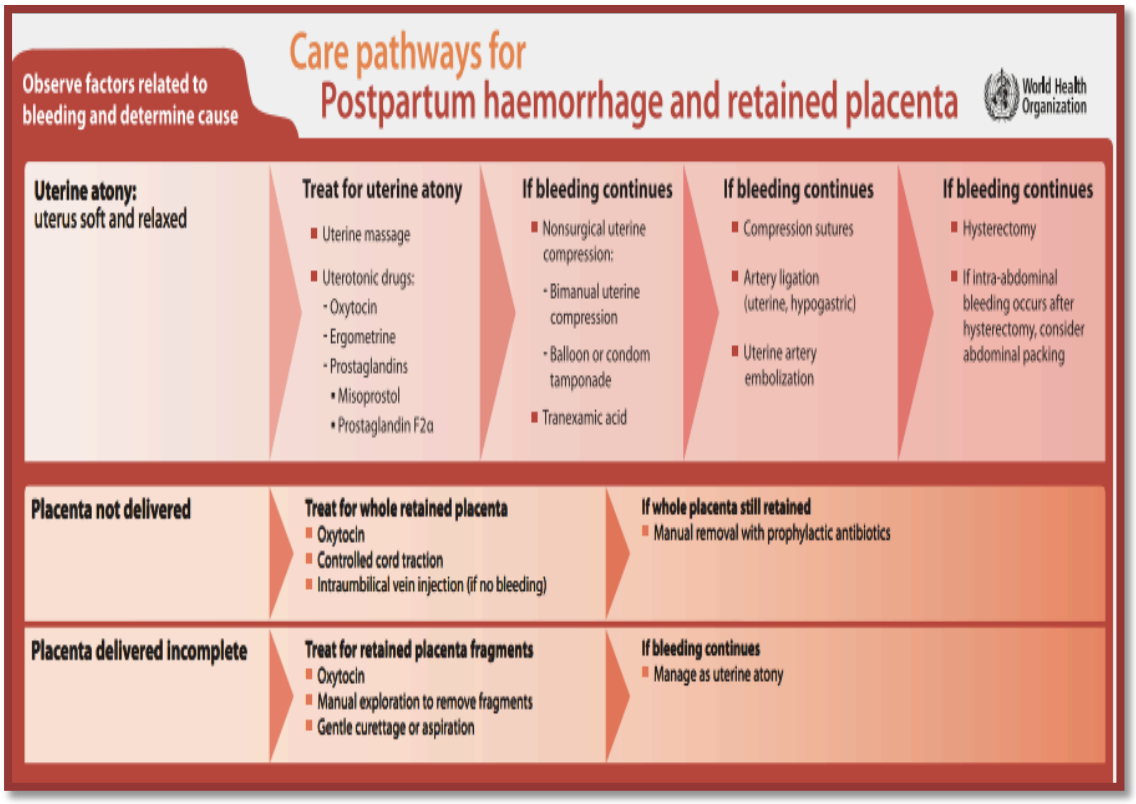
Post delivery vitals of the patient were then noted down.

The labour outcome was noted down according to the proforma.

All the collected data was analyzed by appropriate statistical tests and results were made.

Patients developing PPH and retained placenta were managed according to the guideline provided by the WHO as shown in figure – 4.

Figure – 4 Care pathways for PPH and Retained Placenta



In this study, the study process was as shown below.

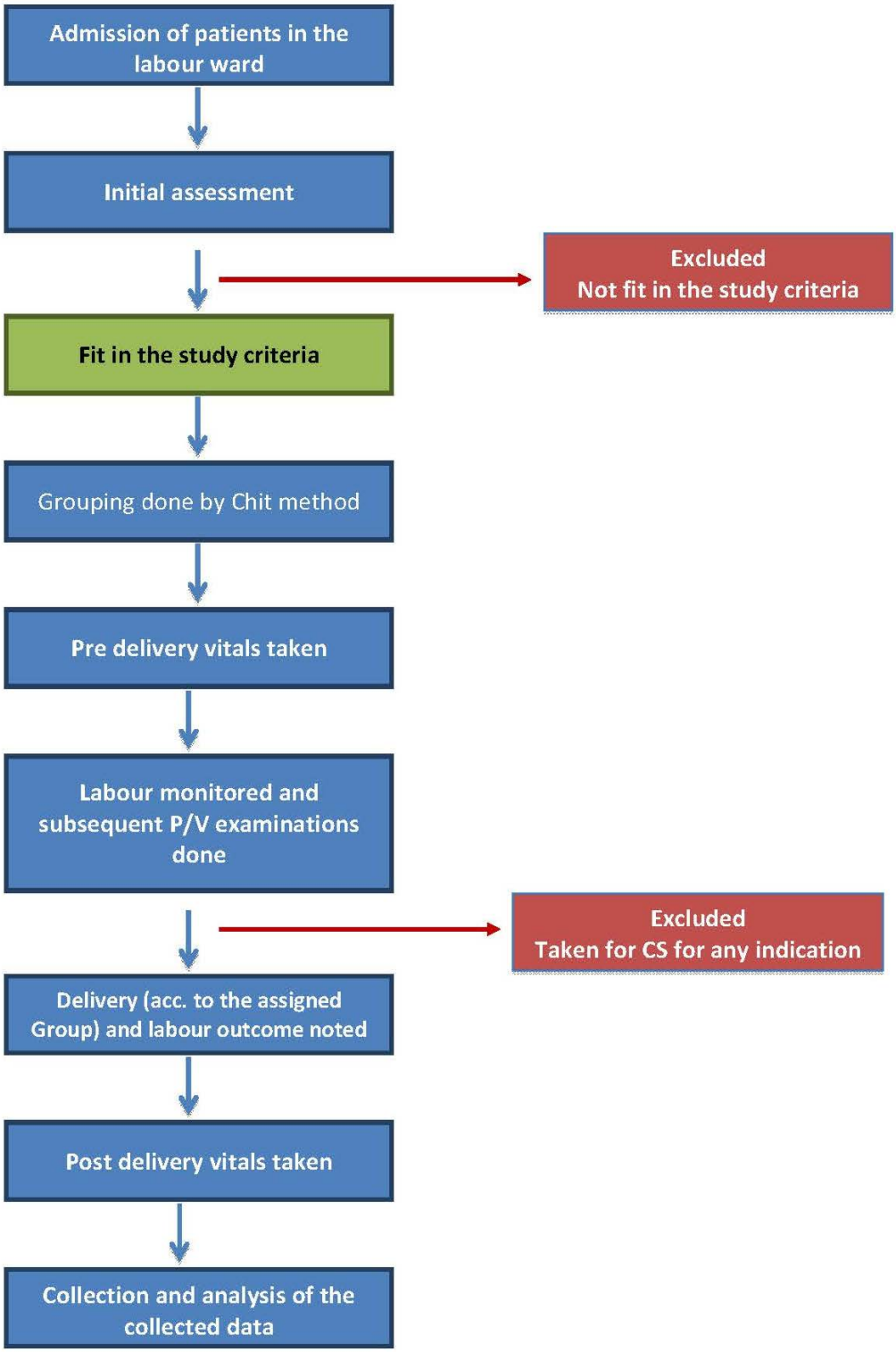


Table – 1 Grouping of patients in this study

Grouping of the patients	
Group A	Received expectant management of third stage of labour
Group B	Received Inj. Oxytocin 10 IU IM at the time of delivery of the anterior shoulder of the baby
Group C	Received Inj. Oxytocin 10 IU IM at the time of delivery of the baby
Group D	Received intra umbilical Oxytocin (10 IU diluted in 20 ml NS) soon after clamping of the umbilical cord

In Groups B, C and D; controlled cord traction was applied in the third stage of labour for delivery of the placenta.

Figure – 5 Kelly's Pad

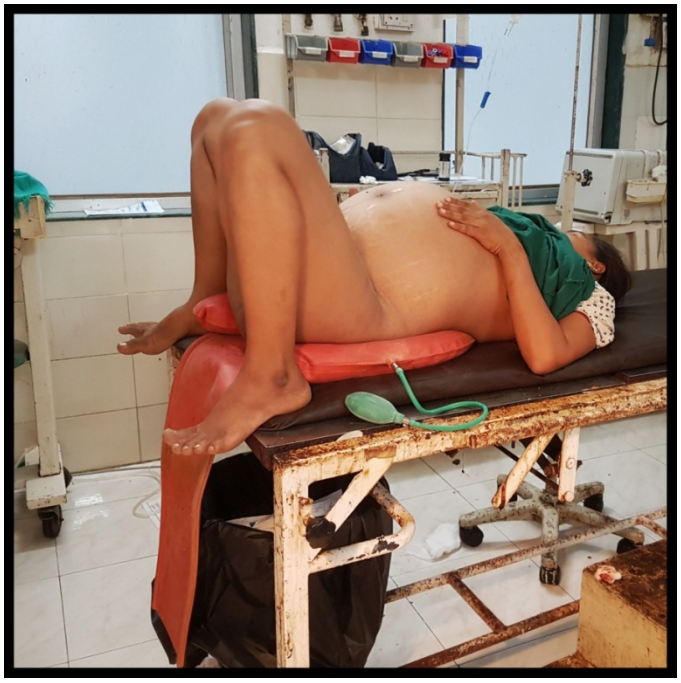


Figure – 6 Calibrated measuring flask

Figure – 7 Giving Inj. oxytocin 10 IU IM at the delivery of anterior shoulder of the baby

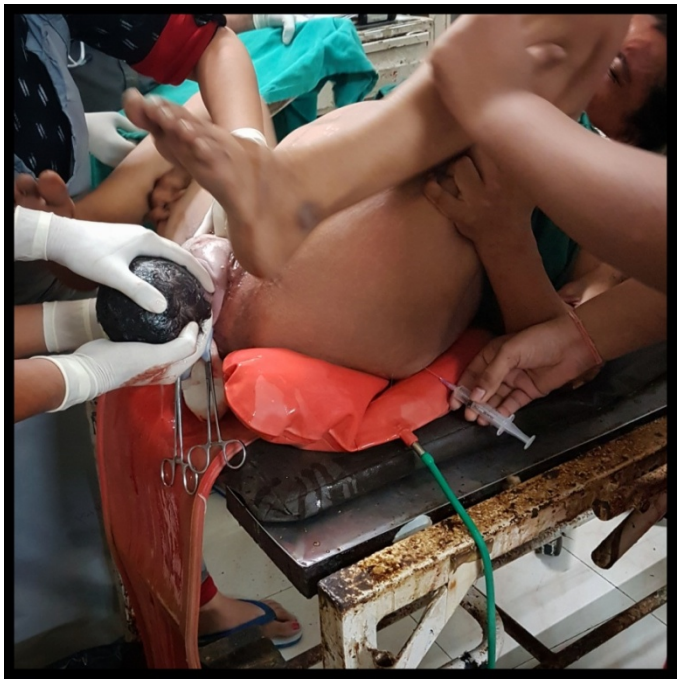


Figure – 8 Giving Inj. oxytocin 10 IU IM after delivery of the baby

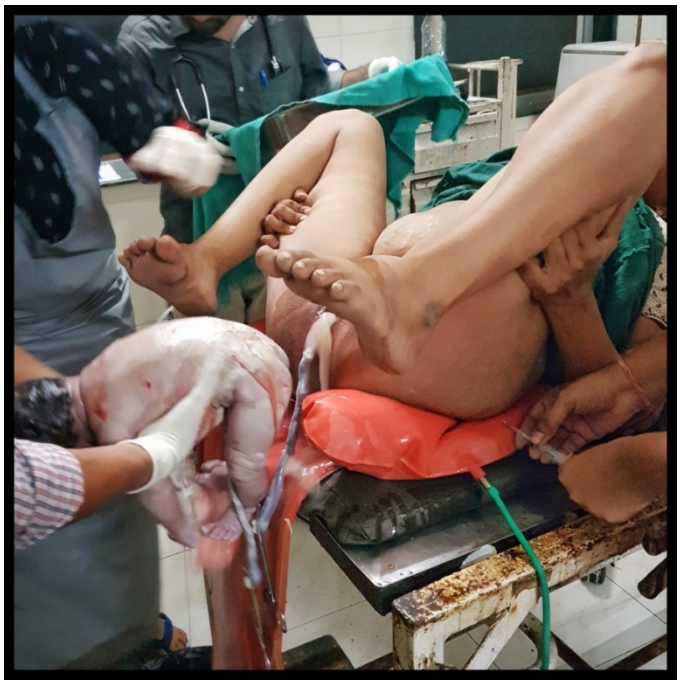
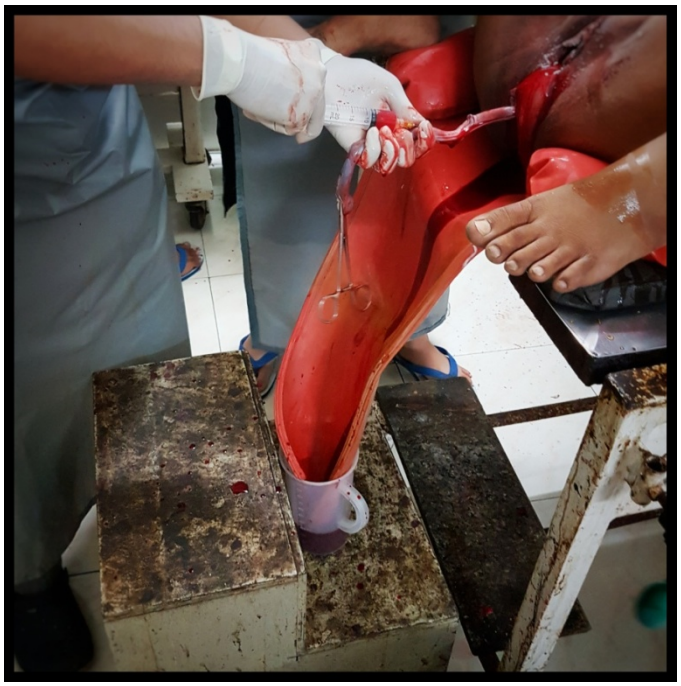


Figure – 9 Giving intra-umbilical vein oxytocin (10 IU diluted in 20 ml NS) after clamping the cord

Figure – 10 Measuring PPBL in the calibrated flask after draining the liquor



PROFORMA FORMAT

S.B.K.S MEDICAL INSTITUTE AND RESEARCH CENTER

DHIRAJ GENERAL HOPITAL

SUMANDEEP VIDYAPEETH UNIVERSITY

TITLE OF THE STUDY

"MANAGEMENT OF 3RD STAGE OF LABOUR:

A COMPARISON OF DIFFERENT METHODS"

A. BIODATA:

- Serial number
- Name of patient
- IPD number
- Age
- Booked/ Unbooked
- Occupation
- Educational status
- Socio economic status
- Duration of pregnancy

B. PRESENTING COMPLAINS:

Labour pains / Leaking Per Vaginum .

C. MENSTRUAL HISTORY

- LMP
- EDD
- Gestational age (wks) (by LMP and Prev USG)

D. OBSTETRIC HISTORY

No of Pregnancy	**Full Term / Pre-Term**	**Mode of delivery**	**BABY** **Alive/Still Birth/Expired** **Sex/Weight**	**Complication like PIH/Eclampsia/Anaemia etc.**	**History of previous PPH**

F. Associated disease/ co- morbid condition/ past history:

G. Family history:

H. Personal History:

I. General physical examination:

J. Systemic Examination:

K. Obstetric Examination:

- **Per abdomen:**
  - Any Scar
  - Fundal Height By Palpation &SFH
  - Lie, Position & Presentation
  - Head Engaged / Floating
  - FHS
  - No. Of Uterine Contractions/Strength/Intensity.

L. STUDY DETAILS

Group	A	B	C	D

Sr. No.

Pre delivery P

BP

Post delivery P

BP

Duration of 2nd stage (min)

Duration of 3rd stage (min)

Injection of oxytocin to placental delivery time

(Only in groups B, C, D)

Blood loss after delivery (ml)

Retained placenta (Y/N)

Manual removal of placentae (Y/N)

PPH (Y/N)

Use of additional uterotonics

Use for blood transfusion (Y/N)

INVESTIGATIONS

- BG
- Hb
- TLC
- RBS

- Urine: R/M,
- HIV, HbsAg, VDRL
- Sickling

OUTCOME OF CURRENT PREGNANCY

- Instrumentation
- Sex of child
- Weight of child
- Cried immediately after birth
- Fetal complication (if any)

RESULTS AND OBSERVATIONS

A total of 200 patients were observed in my study. These patients were allotted into 4 groups as mentioned, each group containing 50 patients.

These patients were managed according to the group they belonged to and data was collected.

This collected data was analyzed by appropriate tests and observations were made.

1) Demographic data

Table – 2 Demographic data of this study

Variable	Group A	Group B	Group C	Group D
Age				
Average Age (years)	26 ± 4.3	26 ± 4.6	23 ± 3.4	23 ± 2.9
Parity				
Nulliparous	12	12	7	10
Primi para	20	18	18	16
Second para	13	16	18	15
Third para	5	4	7	9
Average parity	1.22 ± 0.93	1.24 ± 0.92	1.5 ± 0.91	1.14 ± 0.01
Gestational Age				
Average GA	38 wk 6 d	39 wk	39 wk 1 d	39 wk 1 d
Booking Status				
Booked (n)	45	47	46	45
Un booked (n)	5	3	4	5
Occupation				
Housewife (n)	39	33	40	39
Others (n)	11	17	10	11
Hemoglobin level				
Mean Hb (gm/dl)	10.77 ± 1.25	10.21 ± 1.03	10.65 ± 1.31	10.67 ± 1.03
Rh Status				
Rh positive (n)	48	48	49	49
Rh negative (n)	2	2	1	1

In my study, the distribution of the patients in the 4 groups was as follows:

- Age:

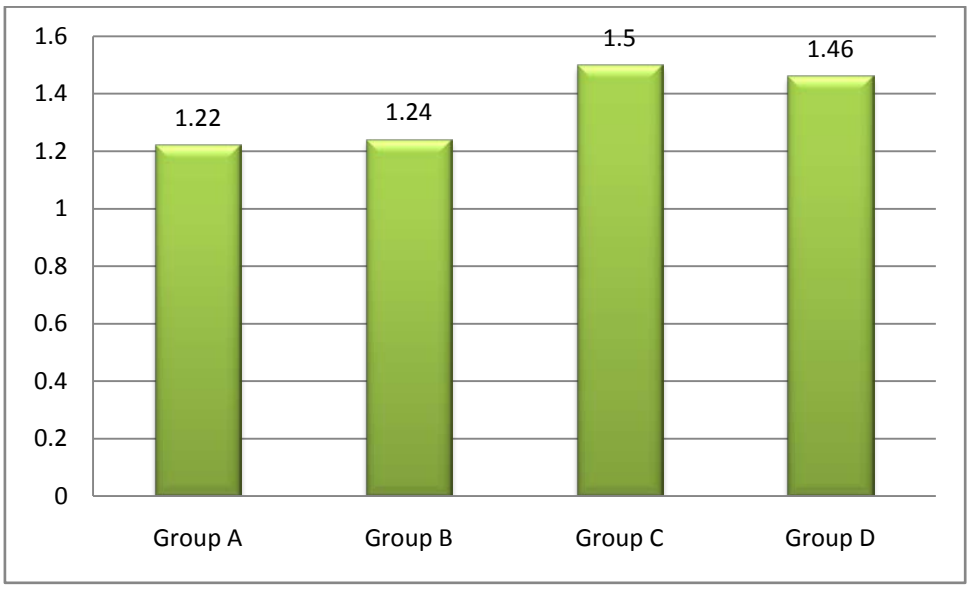
  The average age in Group A was 26 years ± 4.3 years, in Group B was 26 years ± 4.6 years, in Group C was 23 years ± 3.4 years and in Group D was 23 years ± 2.9 years.

- Parity:

  The average parity in Group A was 1.22 ± 0.93, in Group B was 1.24 ± 0.92, in Group C was 1.5 ± 0.91 and in Group D was 1.14 ± 0.01.

  There was no statistical difference among all the groups and all groups were comparable. (p - > 0.05)

Figure – 11 Average Parity among all the groups



- Gestational Age:

  The average gestational age in Group A was 38 weeks 6 days, in Group B was 39 weeks 0 days, in Group C was 39 weeks 1 day and in Group D was 39 weeks 1 day.

- Previous caesarean section:

  2 patients in Group A, 2 patients in group B, 2 patients in Group C and 3 patients in Group D had a history of previous 1 caesarean section.

- History of PPH:

  1 patient in Group C and 1 patient in Group D had a history of PPH in previous pregnancy.

- Occupation:

  The most common occupation among the patients was housewife.

  39 in Group A, 33 in Group B, 40 in Group C and 39 in Group D.

- Haemoglobin levels:

  The mean haemoglobin level in Group A was 10.77 ± 1.25 gm/dl, in Group B was 10.21 ± 1.03 gm/dl, in Group C was 10.65 ± 1.31 gm/dl and in Group D was 10.67 ± 1.03 gm/dl.

  All the groups were comparable in terms of mean haemoglobin level.

- Rh Status:

  Out of 50 patients in each group, 48 (96 %) patients in Group A, 48 (96 %) patients in Group B, 49 (98 %) patients in Group C and 49 (98 %) patients in Group D had positive Rh status.

  2 (4 %) in Group A, 2 (4 %) in Group B, 1 (2 %) in Group C and 1 (2 %) in Group D had negative Rh status.

- History of Augmentation of labour:

  In this study, some patients needed augmentation of labour by uterotonic agents.

  In Group A, 6 patients required augmentation, with the mean time of 152.67 min ± 38.55 min.

  In Group B, 4 patients required augmentation, with the mean time of 132.5 min ± 60.21 min.

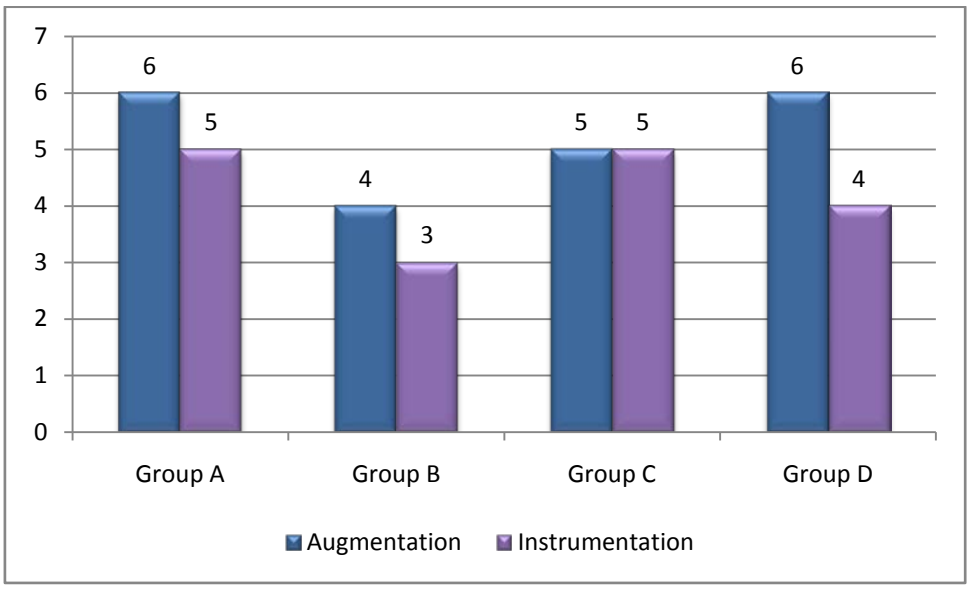
  In Group C, 5 patients required augmentation, with the mean time of 115.2 min ± 74.08 min.

  In Group D, 6 patients required augmentation, with the mean time of 131.17 min ± 115.48 min.

- Instrumentation:

  In this study, 5 patients in Group A, 3 in Group B, 5 in Group C and 4 in Group D required instrumentation at the time of delivery.

Figure – 12 Incidence of Augmentation and Instrumentation in different groups



- Outcome of the pregnancy:

Table – 3 Outcome of the pregnancy

Variable	Group A	Group B	Group C	Group D
Perineal Trauma				
Episiotomy (n)	5	5	7	5
Tears (n)	5	3	3	4
Sex				
Male (n)	23	22	25	21
Female (n)	27	28	25	29
Fetal wt.				
Average Fetal Wt. (kg)	2.86 ± 0.23	2.87 ± 0.22	2.83 ± 0.20	2.87 ± 0.21

- Out of 50 patients in each group, 5 patients had an episiotomy and 5 had perineal tears in Group A, 5 patients had an episiotomy and 3 had perineal tears in Group

B, 7 patients had an episiotomy and 3 had perineal tears in Group C and 5 patients had an episiotomy and 4 had perineal tears in Group D.

- In this study, Group A had 23 male and 27 female births, Group B had 22 male and 28 female births, Group C had 25 male and 15 female births and Group D had 21 male and 29 female births.
- The average fetal weight at birth was 2.86 ± 0.23 kg in Group A, 2.87 ± 0.22 kg in Group B, 2.83 ± 0.20 kg in Group C and 2.87 ± 0.21 kg in Group D.

Figure – 13 Average fetal weight in all groups

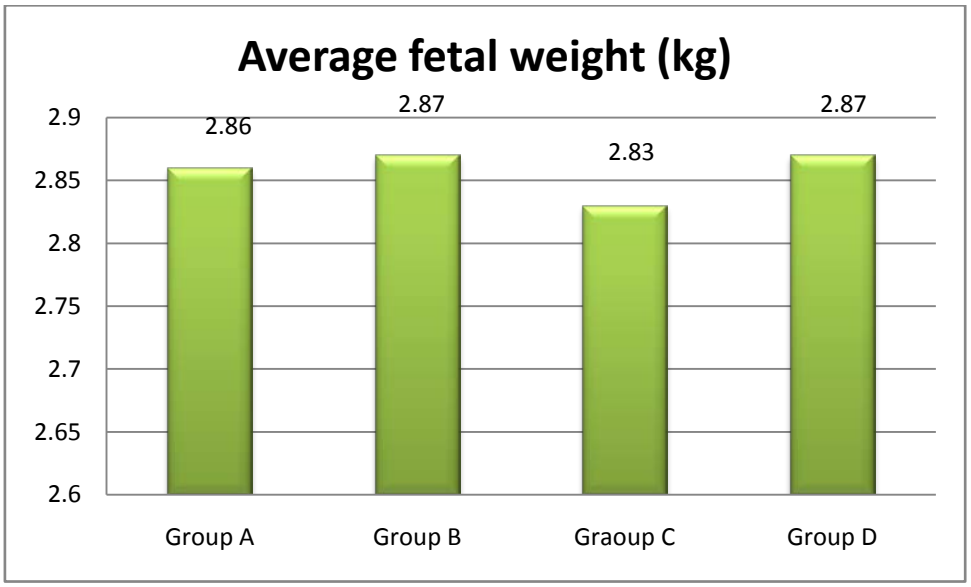


Table – 4 Inter group comparison of average fetal weight

Inter group comparison of average fetal weight		
Groups	***P value***	***Significance***
A vs B	0.825	Not significant
A vs C	0.488	Not significant
A vs D	0.821	Not significant
B vs C	0.343	Not significant
B vs D	1.000	Not significant
C vs D	0.332	Not significant

In this study, there was no statistical significant difference in the average fetal weight among any of the groups. All groups were comparable.

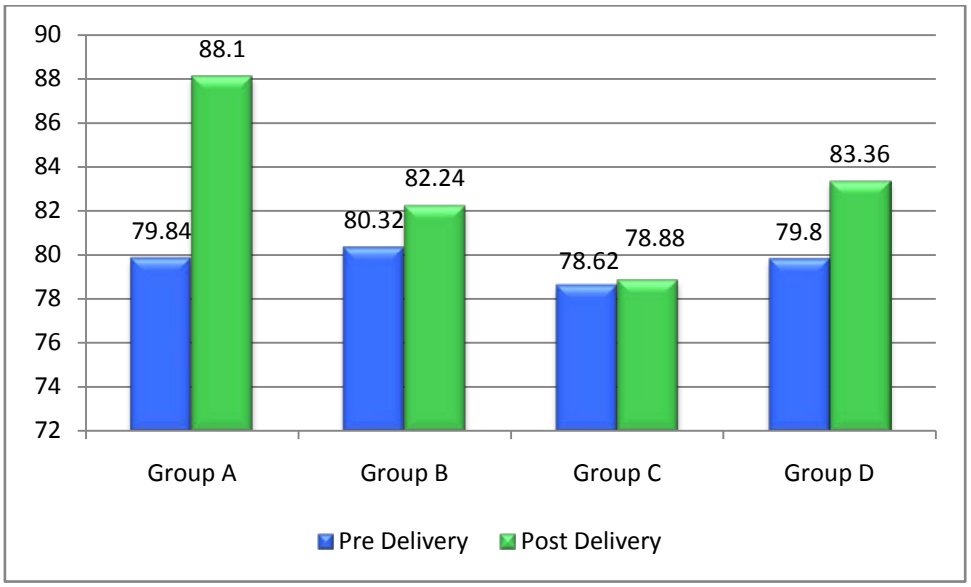
2) Vitals

- Mean Pulse:

Table – 5 Comparison of pre delivery and post delivery Mean Pulse among different groups (/min)

Comparison of pre delivery and post delivery Mean Pulse among different groups (/min)			
Groups	***Pre Delivery***	***Post Delivery***	***p - value***
A	79.84 ± 4.98	88.10 ± 5.78	**0.0001**
B	80.32 ± 6.07	82.24 ± 6.45	0.128
C	78.62 ± 6.79	78.88 ± 5.90	0.838
D	79.80 ± 7.34	83.36 ± 8.23	**0.024**

Figure – 14 Comparison of pre and post delivery mean pulse rate among all groups



In this study, the pre delivery mean pulse of the patients was 79.84 ± 4.98/min in Group A, 80.32 ± 6.07/min in Group B, 78.62 ± 6.79/min in Group C and 79.80 ± 7.34/min in Group D.

In this study, the post delivery mean pulse of the patients was 88.10 ± 5.78/min in Group A, 82.24 ± 6.45/min in Group B, 78.88 ± 5.90/min in Group C and 83.36 ± 8.23/min in Group D.

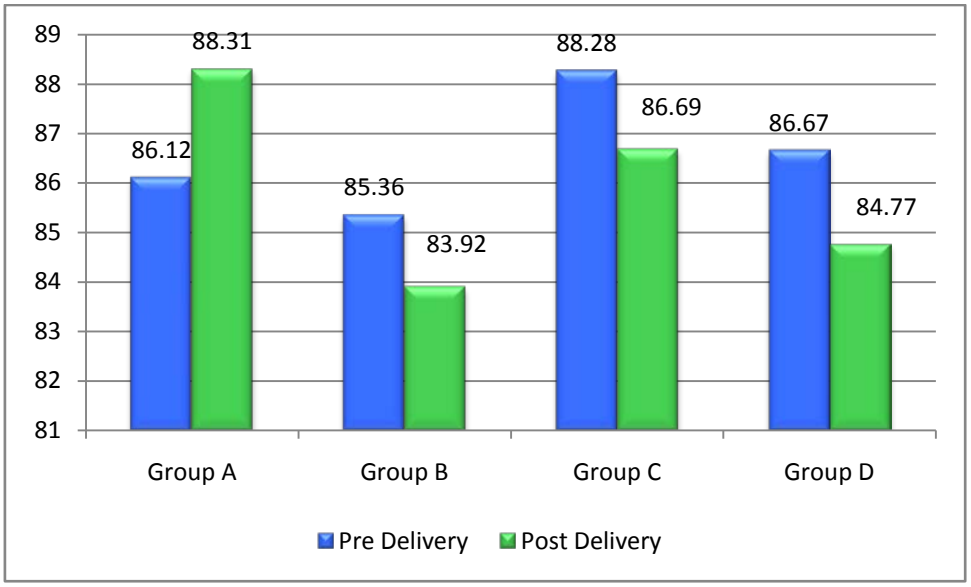
We observed that here there was a statistical difference in the pre delivery and post delivery mean pulse rate in groups A (p – 0.0001) and D (p – 0.024)

- Mean Blood Pressure:

Table – 6 Comparison of pre and post delivery MAP among all groups

Comparison of pre delivery and post delivery Mean Blood Pressure among all groups (mmHg)			
Groups	***Pre Delivery***	***Post Delivery***	***p - value***
A	86.12 ± 5.76	88.31 ± 5.58	0.056
B	85.36 ± 5.42	83.92 ± 6.08	0.214
C	88.28 ± 5.44	86.69 ± 5.52	0.150
D	86.67 ± 6.36	84.77 ± 5.37	0.109

Figure – 15 Comparison of pre and post delivery MAP among all groups



In this study, the pre delivery mean blood pressure was 86.12 ± 5.76 mmHg in Group A, 85.36 ± 5.42 mmHg in Group B, 88.28 ± 5.44 mmHg in Group C and 86.67 ± 6.36 mmHg in Group D.

In this study, the post delivery mean blood pressure was 88.31 ± 5.58 mmHg in Group A, 83.92 ± 6.08 mmHg in Group B, 86.69 ± 5.52 mmHg in Group C and 84.77 ± 5.37 mm Hg in Group D.

We observed that there was no significant difference in the pre delivery and post delivery mean blood pressure in any of the groups. All the groups were comparable.

3) Duration of stages of labour

- Second Stage of labour:

Table – 7 Comparison of mean duration of second stage of labour among all groups

Comparison of mean duration of second stage of labour among all groups	
Groups	***Minutes***
A	23.92 ± 12.09
B	22.24 ± 8.66
C	22.58 ± 8.59
D	19.60 ± 10.35

In this study, the mean duration of second stage of labour in Group A was 23.92 ± 12.09 min, in Group B was 22.24 ± 8.66 min, in Group C was 22.58 ± 8.59 min and in Group D was 18.06 ± 11.17 min.

Figure – 16 Mean duration of second stage of labour among all groups

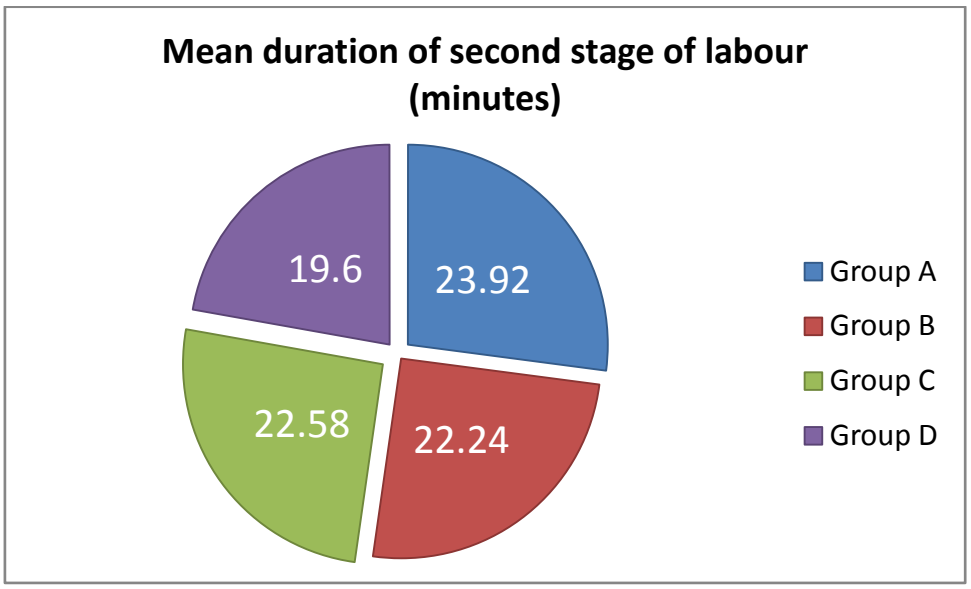


Table – 8 Inter group comparison of second stage of labour

Inter group comparison of second stage of labour		
Groups	**P value**	**Significance**
A vs B	0.426	Not significant
A vs C	0.524	Not significant
A vs D	0.057	Not significant
B vs C	0.844	Not significant
B vs D	0.169	Not significant
C vs D	0.120	Not significant

In this study, we observed on inter group comparison that all the groups were comparable and there was no significant difference in the duration of second stage of labour among all the groups.

- Third Stage of labour:

Table – 9 Comparison of mean duration of third stage of labour among all groups

Comparison of mean duration of third stage of labour among different groups	
Groups	**Minutes**
A	13.46 ± 8.73
B	5.32 ± 3.05
C	5.36 ± 2.86
D	5.82 ± 5.39

In this study, the mean duration of third stage of labour was 13.46 ± 8.73 min in Group A, 5.32 ± 3.05 min in Group B, 5.36 ± 2.86 min in Group C and 5.82 ± 5.39 min in Group D.

Figure – 17 Mean duration of third stage of labour among all groups

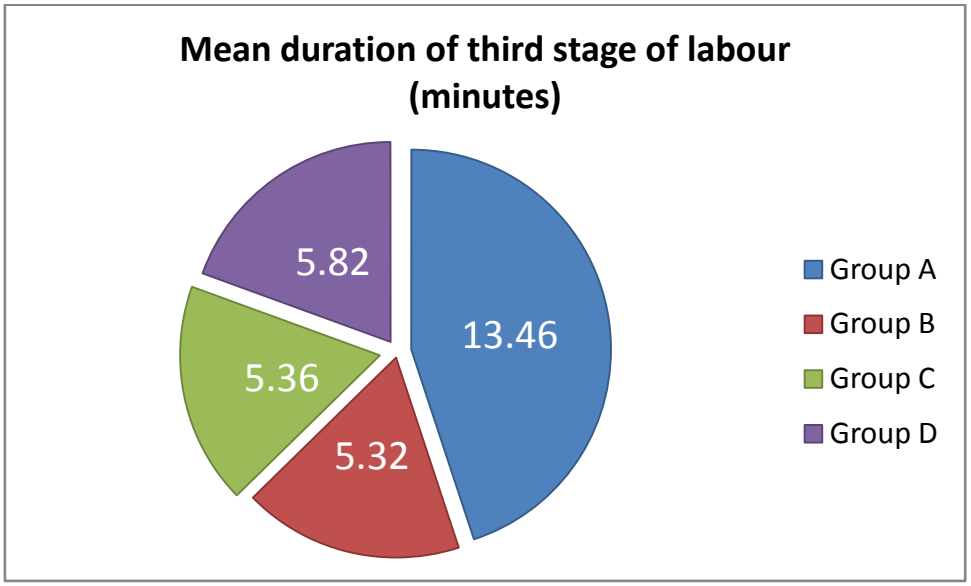


Table – 10 Inter group comparison of third stage of labour

Inter group comparison of third stage of labour		
Groups	**P value**	**Significance**
A vs B	**0.0001**	**Significant**
A vs C	**0.0001**	**Significant**
A vs D	**0.0001**	**Significant**
B vs C	0.087	Not significant
B vs D	0.446	Not significant
C vs D	0.595	Not significant

In our study, we observed that there was a significant difference in the mean duration of third stage of labour in Group A as compared to all other groups.

All other groups (B, C, D) showed comparable results.

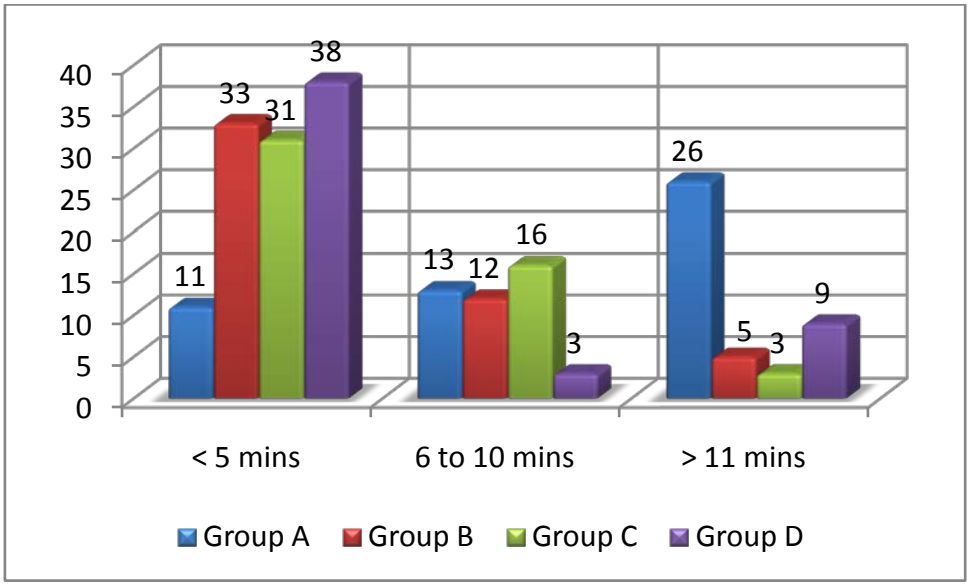
This suggests that patients in Group A had significantly longer duration of the third stage of labour.

On dividing the third stage of labour in 3 parts: ≤ 5 min, 6 – 10 min and ≥ 11 min,

Table – 11 Subdivision of third stage of labour among all groups

Incidence according to mean duration of third stage of labour at different time intervals in different groups					
Time (min)	***Group A***	***Group B***	***Group C***	***Group D***	***Total***
≤ 5	11 (22 %)	33 (66 %)	31 (62 %)	38 (76 %)	*113 (56.5 %)*
6 – 10	13 (26 %)	12 (24 %)	16 (32 %)	3 (6 %)	*44 (22 %)*
≥ 11	26 (52 %)	5 (10 %)	3 (6 %)	9 (18 %)	*43 (21.5 %)*
N=	*50*	*50*	*50*	*50*	*200*

Figure – 18 Incidence at different time intervals of third stage of labour



In Group A, 22% of the patients had mean duration of third stage of labour ≤ 5 min, as compared to Group B (66%), Group C (62%) and Group D (76%).

In Group A, 26% of the patients had mean duration of third stage of labour between 6 to 10min, as compared to Group B (24%), Group C (32%) and Group D (6%).

In Group A, 52% of the patients had mean duration of third stage of labour ≥ 11 min, as compared to Group B (10%), Group C (6%) and Group D (18%).

- In this study, we compared the time between oxytocin administration and the delivery of the placenta.

Table – 12 Comparison of time between oxytocin administration and the delivery of the placenta among all groups

Comparison of time between oxytocin administration and the delivery of the placenta among all groups	
Groups	***Time (min)***
A	-
B	6.10 ± 3.05
C	5.36 ± 2.86
D	4.74 ± 4.69

Table – 13 Inter group comparison of time between oxytocin administration and the delivery of the placenta

Inter group comparison of time between oxytocin administration and the delivery of the placenta		
Groups	***P – value***	***Significance***
B vs C	0.214	Not Significant
B vs D	0.089	Not Significant
C vs D	0.427	Not Significant

The time between oxytocin administration and delivery of placenta was 6.10 ± 3.05 min in Group B, 5.36 ± 2.86 min in Group C and 4.74 ± 4.69 min in Group D. Group A patients did not receive oxytocin.

We observed that there was no statistical difference in the time between oxytocin administration and the delivery of the placenta among the different groups. (p - >0.05 among all groups)

4) Post partum blood loss and PPH:

- PPBL:

Table – 14 Average PPBL among all groups

Average PPBL among all groups				
	Group A	***Group B***	***Group C***	***Group D***
PPBL (ml)	365.20 ± 89.01	289.60 ± 41.01	302 ± 52.45	302.6 ± 78.58
PPBL > 500 ml (n)	6 (12%)	0	0	2 (4%)

In this study, the average PPBL was 365.20± 89.01 ml in Group A, 289.60 ± 41.01 ml in Group B, 302 ± 52.45 ml in Group C and 302.60 ± 78.58 ml in Group D.

Figure – 19 Comparison of average PPBL among all groups

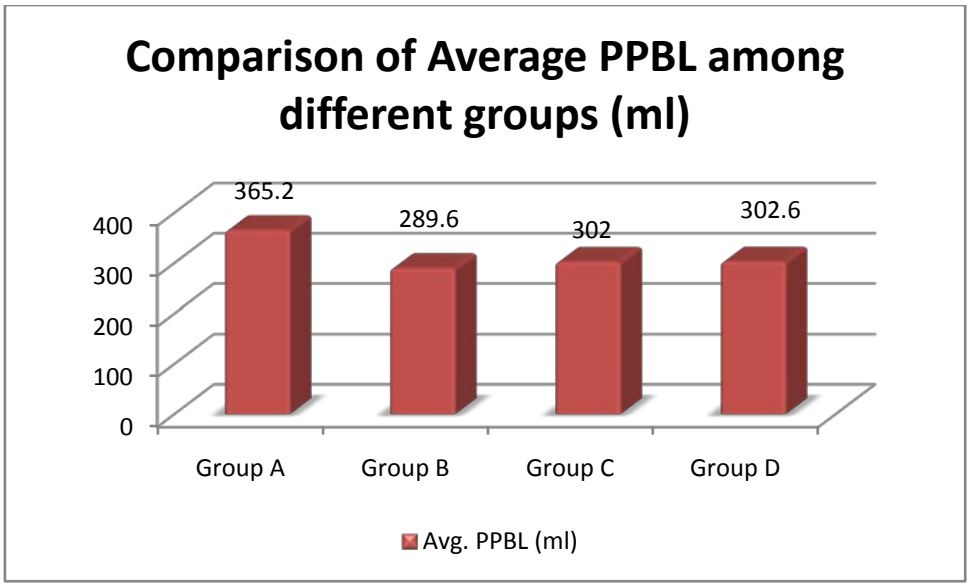


Table – 15 Inter group comparison of mean PPBL

Inter group comparison of mean PPBL		
Groups	***P value***	***Significance***
A vs B	**0.0001**	**Significant**
A vs C	**0.0001**	**Significant**
A vs D	**0.0003**	**Significant**
B vs C	0.190	Not significant
B vs D	0.302	Not significant
C vs D	0.964	Not significant

This study shows that there was significant difference in the PPBL in Group A as compared to Group B (p – 0.0001), Group C (p – 0.0001) and Group D (p – 0.0003)

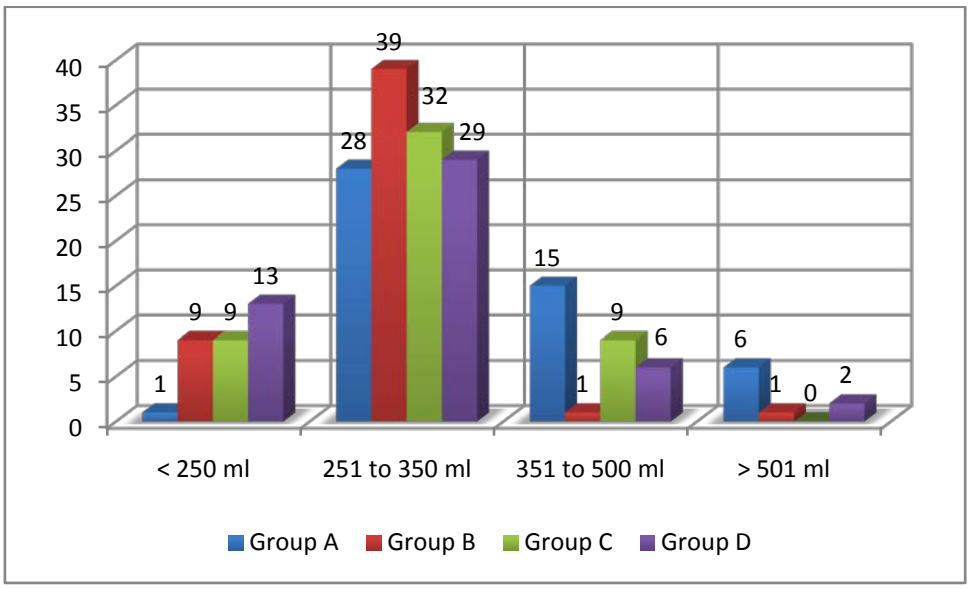
All the other groups were comparable with each other in the post partum blood loss.

- In this study, on dividing the PPBL into 4 groups – ≤250 ml, 251 to 350 ml, 351 to 500 ml and ≥501 ml and comparing the results:

Table – 16 Incidence according to different levels of mean PPBL in all groups

Incidence according to different levels of mean PPBL in all groups					
PPBL (ml)	***Group A***	***Group B***	***Group C***	***Group D***	***Total***
≤ 250	1 (2%)	9 (18%)	9 (18%)	13 (26%)	32 (16%)
251 to 350	28 (56%)	39 (78%)	32 (64%)	29 (58%)	128 (64%)
351 to 500	15 (30%)	1 (2%)	9 (18%)	6 (12%)	31 (15.5%)
≥ 501	6 (12%)	1 (2%)	0 (0%)	2 (4%)	9 (4.5%)
N =	*50*	*50*	*50*	*50*	*200*

Figure 20 – Incidence at further sub division of PPBL



In this study, we observed that,

2 % patients of Group A, 18 % of Group B, 18 % of Group C and 26 % of Group D had PPBL $\leq$ 250 ml.

56 % patients of Group A, 78 % of Group B, 64% of Group C and 58 % of Group D had PPBL between 251 to 350 ml.

30 % patients of Group A, 2 % of Group B, 18 % of Group C and 12 % of Group D had PPBL between 351 to 500 ml.

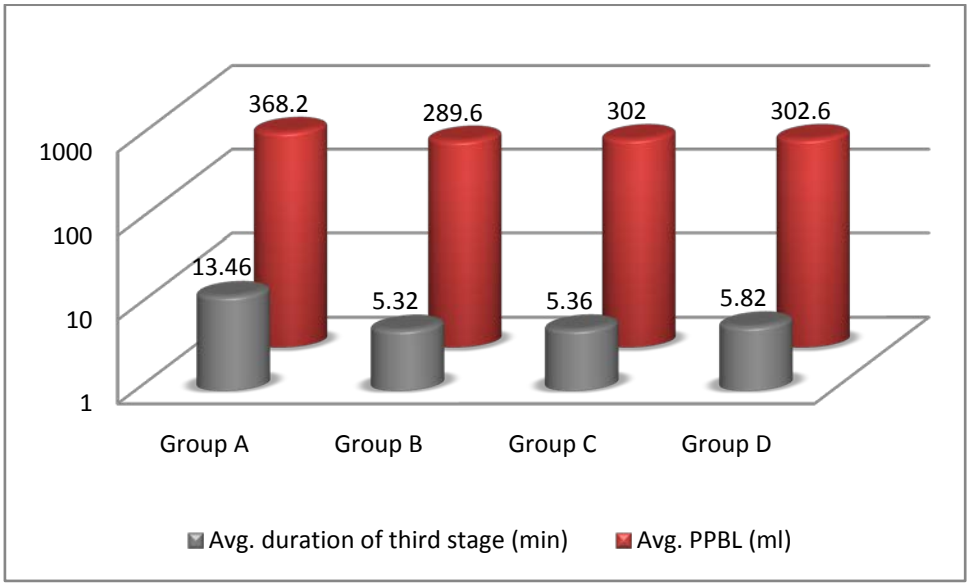
And, 6 % patients of Group A, 2 % of Group B, 0 % of Group C and 4 % of Group D had PPBL od $\geq$ 501 ml.

In this study, we also observed that out of all 200 patients, 16 % had PPBL $\leq$250 ml, 64 % had PPBL between 250 and 350 ml, 15.5 % had PPBL between 351 and 500 ml, and 4.5 % had PPBL $\geq$ 501 ml.

Table – 17 Comparison of average duration of third stage of labour with average PPBL among all groups

Comparison of average duration of third stage of labour with average PPBL among all groups		
Groups	***Avg. duration of third stage of labour (min)***	***Avg. PPBL (ml)***
A	13.46 ± 8.73	368.20 ± 89.01
B	5.32 ± 3.05	289.60 ± 41.01
C	5.36 ± 2.86	302.00 ± 52.45
D	5.82 ± 5.39	302.60 ± 78.58

Figure – 21 Comparison of third stage duration with PPBL among all groups

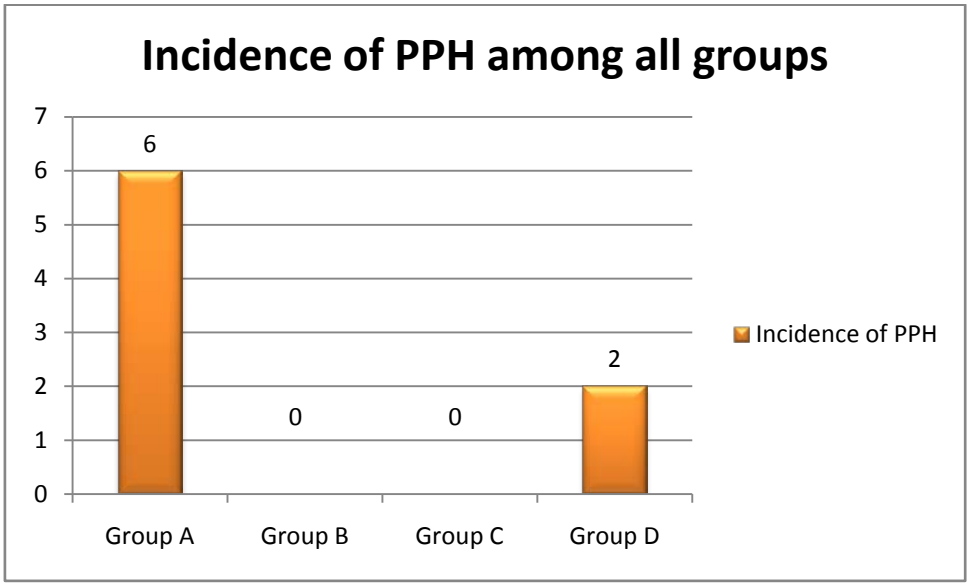


This study suggests that the PPBL increases when the duration of third stage of labour increases.

- PPH:

A total of 8 patients out of 200 developed PPH (4%) in this study.

Figure – 22 Incidence of PPH among all groups



The incidence of PPH (PPBL > 500 ml) was 6 (12%) in Group A, 0 (0%) in Group B, 0 (0%) in Group C and 2 (4%) in Group D.

No patients in Group B or C had developed PPH.

However, none of the patients in any group had PPBL > 1000 ml. (0%)

In this study, 5 patients from Group A, 3 from Group B, 5 from Group C and 4 from Group D had undergone instrumental deliveries.

Table – 18 Incidence of PPH in patients with instrumental deliveries among all groups

Incidence of PPH in patients with instrumental deliveries among all groups			
Groups	***Instrumental Deliveries (n)***	***Incidence of PPH among those patients (n)***	***Percentage***
A	5	3	60%
B	3	0	0 %
C	5	0	0 %
D	4	0	0 %

This study shows that 60 % of the patients from Group A, who had instrumental deliveries, developed PPH.

No such patients from the other groups had PPH.

- Rate of blood transfusion:

Table – 19 Comparison of average PPBL and rate of blood transfusions among all groups

Comparison of average PPBL and rate of blood transfusions among all groups			
Groups	***Average PPBL (ml)***	***No. of Blood Transfusions (n=8)***	***Percentage***
A	365.20 ± 89.01	6 (12 %)	75 %
B	289.60 ± 41.01	0 (0%)	0 %
C	302 ± 52.45	0 (0%)	0 %
D	302.60 ± 78.58	2 (4 %)	25 %

In this study, a total of 8 patients received blood transfusion.

Of those, 6 patients (75 %) were from Group A and 2 (25 %) from Group D.

5) Retained placenta:

In this study, 4 patients had retained placenta.

Table – 20 Comparison of retained placenta rate with the need to add uterotonic agent and manual removal of placenta among those patients of different groups

Comparison of retained placenta rate with the need to add uterotonic agent and manual removal of placenta among those patients of different groups			
Groups	***Retained placenta (n)***	***Need to add uterotonic***	***Manual removal of placenta***
A	3 (6%)	2	2
B	1 (2%)	1	1
C	0 (0%)	0	0
D	0 (0%)	0	0

In this study, out of the 4 patients who had retained placenta, 3 belonged to Group A and 1 to Group B.

In Group A, out of these patients, 2 needed to add a uterotonic agent and both later required manual removal of the placenta.

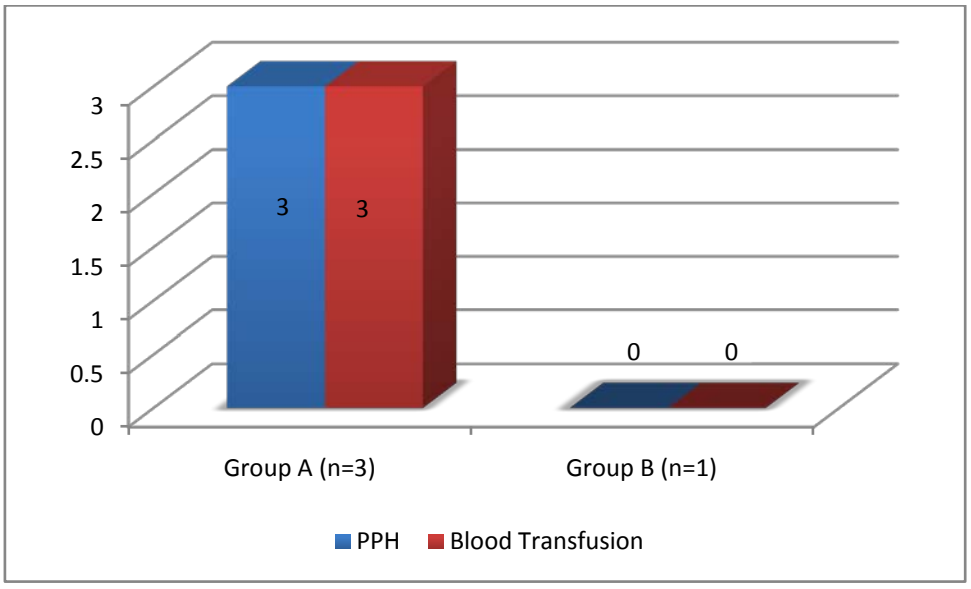
In Group B, the patient who had a retained placenta, needed additional uterotonic agent and also required manual removal of the placenta.

Rate of PPH and Blood Transfusion in patients with retained placenta:

Table – 21 Comparison of rate of PPH and Blood Transfusion in patients having retained placenta among all groups

Comparison of rate of PPH and Blood Transfusion in patients having retained placenta among all groups		
Groups	***PPH***	***BT***
A (n=3)	3	3
B (n=1)	0	0

Figure – 23 Incidence of PPH and BT in patients having retained placenta



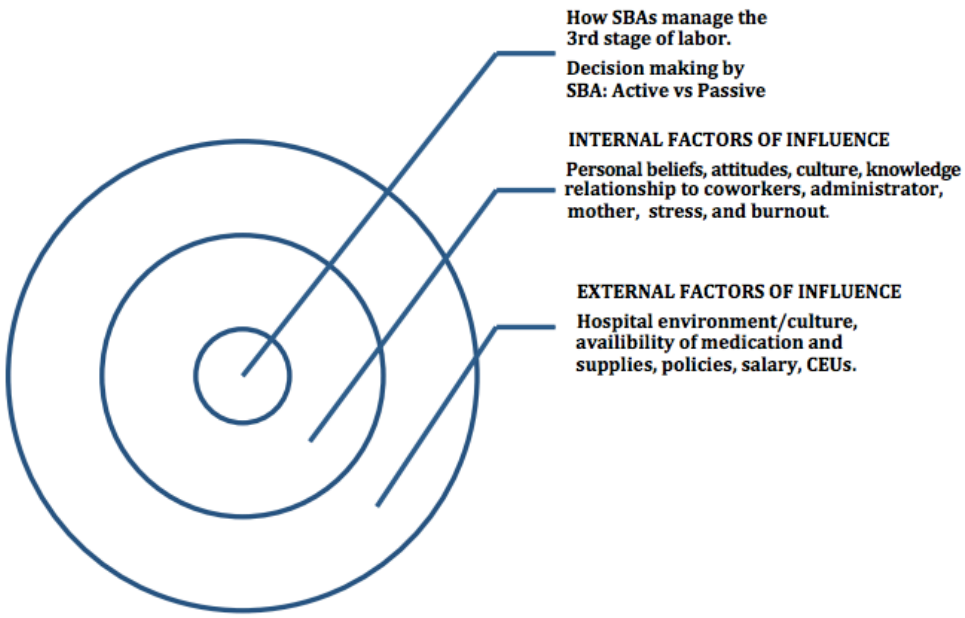
All patients in Group A, who had retained placenta developed PPH (100 %) and all required a blood transfusion.

In Group B, no patient who had a retained placenta developed PPH or required a blood transfusion.

DISCUSSION

A prolonged third stage of labour is often associated with increased risk of maternal morbidity and mortality due to retained placenta or post-partum haemorrhage. In developing countries like India, where the incidence of anaemia during pregnancy is high, even a small amount of blood loss may be of great clinical significance. Reducing the time of delivery of placenta through active management of third stage can prevent uterine atony and subsequent PPH. Use of oxytocin can make a difference in the level of blood loss as women receiving oxytocin lose less blood and deliver placenta faster, resulting in a reduced incidence of postpartum haemorrhage and manual removal of placenta. [76]

Figure – 24 Conceptual Model: Decision making by the skilled birth attendants on management of third stage of labour



(Gowan, 2014, as adapted from Baxter, 2003, p. 28)

In this study, we took into consideration 4 methods in the management of the third stage of labour; like expectant management, Inj. Oxytocin IM after the edelivery of the anterior shoulder of the baby, Inj. Oxytocin after the delivery of the baby and intra umbilical vein oxytocin after clamping the cord; and compared the results.

Demographic data

In this study, all the groups were comparable in terms of demographic data as seen in table 2.

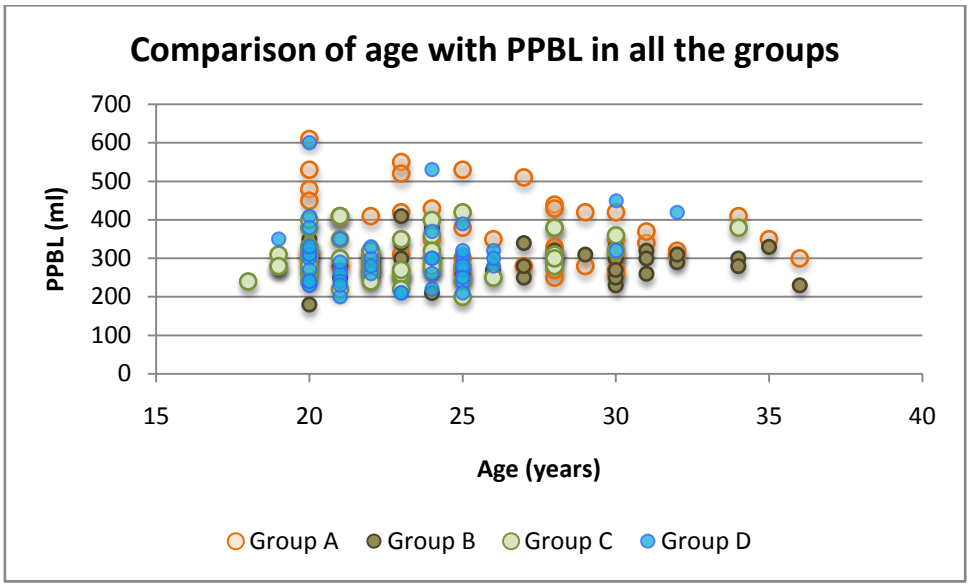
Table 2

Variable	Group A	Group B	Group C	Group D
Age				
Average Age (years)	26 ± 4.3	26 ± 4.6	23 ± 3.4	23 ± 2.9
Parity				
Nulliparous	12	12	7	10
Primi para	20	18	18	16
Second para	13	16	18	15
Third para	5	4	7	9
Average parity	1.22 ± 0.93	1.24 ± 0.92	1.5 ± 0.91	1.14 ± 0.01
Gestational Age				
Average GA	38 wk 6 d	39 wk	39 wk 1 d	39 wk 1 d
Booking Status				
Booked (n)	45	47	46	45
Un booked (n)	5	3	4	5
Occupation				
Housewife (n)	39	33	40	39
Others (n)	11	17	10	11
Hemoglobin level				
Mean Hb (gm/dl)	10.77 ± 1.25	10.21 ± 1.03	10.65 ± 1.31	10.67 ± 1.03
Rh Status				
Rh positive (n)	48	48	49	49
Rh negative (n)	2	2	1	1

Age:

The average age of all patients in the study was 24.5 ± 3.8 years and there was no significant difference in the ages in all the groups (P - > 0.05)

Figure – 25 Comparison of age with PPBL in all the groups



The maximum number of patients belonged to the age group of 20 – 25 years. This may so as pregnancy is more common in this time of the reproductive age group in these people.

The PPBL did not increase or decrease much with the increase in maternal age.

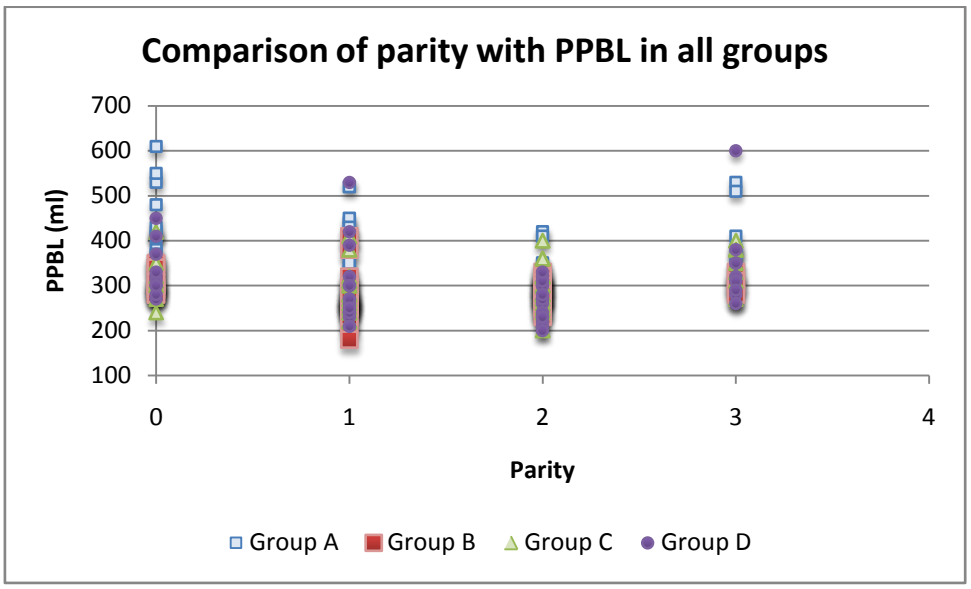
The age of the patients in any group had no relation with the blood loss.

– Parity:

The average parity of all the patients in the study was 1.36 ± 0.69.

The average parity was 1.22 ± 0.93 in Group A, 1.24 ± 0.92 in Group B, 1.5 ± 0.91 in Group C and 1.14 ± 0.01 in Group D.

Figure – 26 Comparison of parity with PPBL in all groups



All the groups were comparable in terms of parity.

There was no significant difference seen in PPBL with different parity status of the patients.

According to studies by Biguzzi et al and Ford JB et al, nulliparity and high parity were identified as risk factors for PPH. [77, 78]

In our study, we did not find such a significant difference in any parity group. This may be because the the study was being done in a tertiary care center with skilled obstetricians present at all times.

This suggests that in set ups with a skilled obstetrician, parity may not make a big difference.

– Gestational Age:

The average gestational age of all the patients in the study was 39 weeks 1 day.

Average gestational age was 38 weeks 6 days in Group A, 39 weeks in Group B, 39 weeks 1 day in Group C and 39 weeks 1 dasy in Group D.

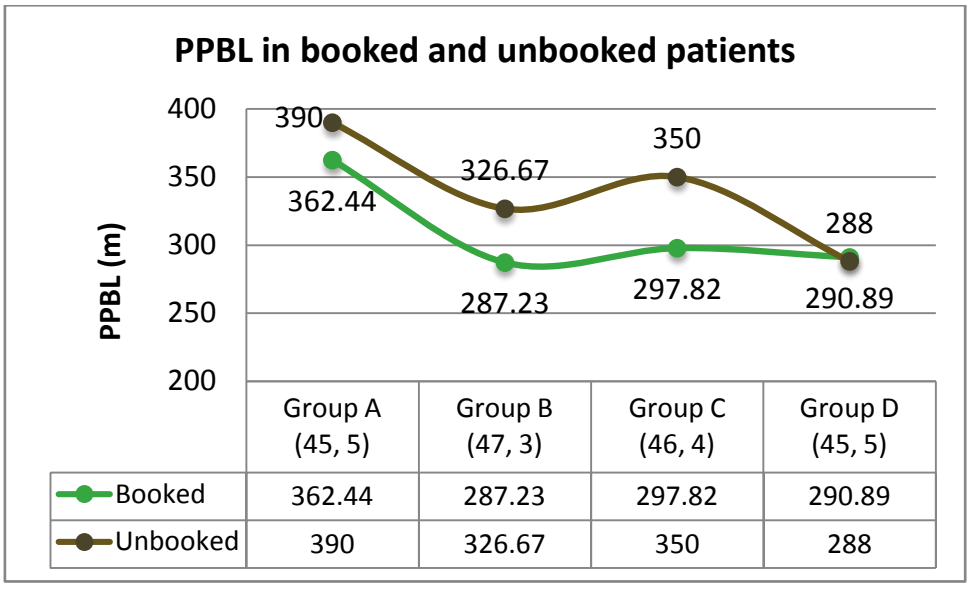
So all the groups were comparable in terms of gestational ages.

– Booking status:

In terms of booking status, there were 45 (90 %) booked patients in Group A, 47 (94 %) in Group B, 46 (92 %) in Group C and 45 (90 %) in Group D.

The booking status was high in all the groups as the hospital provides free antenatal check up and also free medications and supplies like ghee, jaggery and other such material to all booked patients every month.

Figure – 27 Comparison of PPBL in booked and unbooked patients



On comparing the booking status with the PPBL, we could see that booked patients had reduced blood loss as compared with unbooked patients.

May be proper antenatal care given to these patients led to an better nutritional status and a healthier pregnancy due to proper counselling and supplementation. This might have caused reduced bleeding.

Also, the booked patients knew about their EDD and so were prepared and came to the hospital on time.

– Haemoglobin level:

The mean haemoglobin level of all the patients in the study was 10.58 ± 1.16 gm/dl.

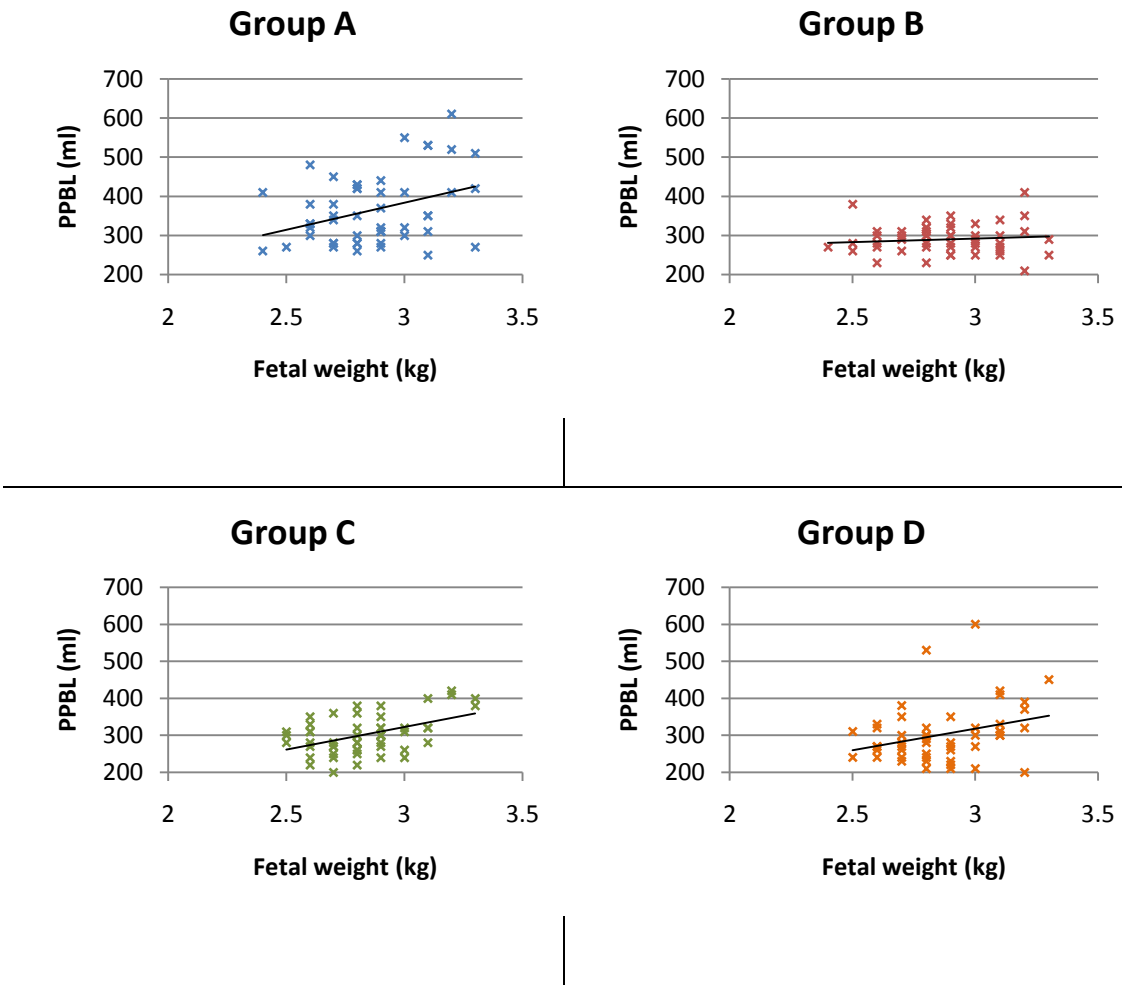
The mean haemoglobin of patients in Group A was 10.77 ± 1.25 gm/dl, in Group B was 10.21 ± 1.03 gm/dl in Group B, 10.65 ± 1.31 gm/dl in Group C and 10.67 ± 1.03 gm/dl in Group D.

The mean haemoglobin levels in all groups was greater than 10 gm/dl which shows the impact of regular antenatal check up and regular medication and high iron diet has on the patients coming from families with low income and malnutrition.

– Fetal weight:

The average fetal weight was 2.86 ± 0.23 kg in Group A, 2.87 ± 0.22 kg in Group B, 2.83 ± 0.20 in Group C and 2.87 ± 0.21 in Group D. all the groups were comparable (p - > 0.05) and so fetal weight did not have an influence on the outcome of the study.

Figure – 28 Comparison of average fetal weight with PPBL in all the groups



We could see that as the weight of the fetus increased, the PPBL also increased.

But the increase in PPBL was not exponential such that it causes PPH.

The benefits of a healthier fetus out weigh the risks to the mother of increased PPBL but that must be kept in mind while providing antenatal care and conducting the delivery.

Vitals

In this study, there was no significant difference in the mean blood pressures before and after delivery in any of the groups.

Although there was a significant difference in the pulse rate between pre delivery and post delivery in Group A and Group D.

(p – 0.0001 in Group A and p – 0.024 in Group D)

Table - 5

Comparison of pre delivery and post delivery Mean Pulse among all groups			
Groups	***Pre Delivery (/min)***	***Post Delivery (/min)***	***p - value***
A	79.84 ± 4.98	88.10 ± 5.78	**0.0001**
B	80.32 ± 6.07	82.24 ± 6.45	0.128
C	78.62 ± 6.79	78.88 ± 5.90	0.838
D	79.80 ± 7.34	83.36 ± 8.23	**0.024**

Table – 6

Comparison of pre delivery and post delivery Mean Blood Pressure among different groups			
Groups	***Pre Delivery (mmHg)***	***Post Delivery (mmHg)***	***p - value***
A	86.12 ± 5.76	88.31 ± 5.58	0.056
B	85.36 ± 5.42	83.92 ± 6.08	0.214
C	88.28 ± 5.44	86.69 ± 5.52	0.150
D	86.67 ± 6.36	84.77 ± 5.37	0.109

This significant increase in the pulse rate post delivery in Groups A and D reflect the amount of blood loss that occurred.

In a study by Sakineh Mohamadian et al, oxytocin injection of 10 IU was given before delivery (Intervention group) and after baby delivery (Control group).[72]

Figure – 29 Comparison of parameters in a study by Sakineh et al

Table 3. Comparison of the mean blood pressure, and pulse rate, before and after childbirth, in the intervention and control groups

Variables	Intervention		Control		P-value	
	before childbirth	after childbirth	before childbirth	after childbirth	before childbirth	after childbirth
Systolic blood pressure (mmHg)	114±11.2	106±14.1	112±9.3	107±132	0.629	0.826
Diastolic blood pressure (mmHg)	71.2±8.0	69±8.0	69.4±7.1	72±7.1	0.237	0.140
pulse rate (rate/min)	77±7.1	85.5±7.3	79±7.1	88.2±10.7	0.137	0.220

There was no significant difference in the blood pressure or pulse rate in the intervention and control group as active management was used in both the groups and the PPBL was 183.4 ± 145.8 ml in the intervention group and 202.2 ± 208.8 ml in the control group (p - >0.60 not significant).

The results were similar to ours in the intervention group and no significance was found.

According to Kestent et al, intravenous oxytocin has hypotensive effects [79]; however Jago et al. studied the effect of oxytocin on blood pressure and reported that oxytocin infusion has no effect on blood pressure [80]. Puri et al. suggested that intramuscular oxytocin does not decrease blood pressure. [76]

We can suggest from these findings that the blood loss in Groups A and D was significant enough to cause a change in the mean pulse rates before and after delivery.

But the blood loss was not so much so as to cause a change in the mean blood pressure of the patients.

May be a study with more patients will be needed for further evaluating the role of oxytocin on the blood pressure.

Duration of third stage of labour

In our study, the mean duration of third stage of labour was 13.46 ± 8.73 min in Group A, 5.32 ± 3.05 in Group B, 5.36 ± 2.86 min in Group C and 5.82 ± 5.39 min in Group D.

Table – 22 Comparison of duration of third stage of labour with expectant management of our study with other studies

Duration of third stage with expectant management			
	Our study	**Dogukan Yildlrlm et al**	**B. Thilaganathan et al**
Duration of third stage of labour (min)	13.46 ± 8.73	9.26 ± 4.59	13

Table – 23 Comparison of duration of third stage of labour with oxytocin given with the delivery of the anterior shoulder of the baby of our study with other studies

Duration of third stage with oxytocin was given with the delivery of the anterior shoulder of the baby			
	Our study	**Maryam Kashanian et al**	**Manthan M. Patel et al**
Duration of third stage of labour (min)	5.32 ± 3.05	4.69 ± 5.51	5.16

Table – 24 Comparison of duration of third stage of labour with oxytocin was given after delivery of the baby of our study with other studies

Duration of third stage with oxytocin was given after delivery of the baby			
	Our study	**Dogukan Yildlrlm et al**	**B. Thilaganathan et al**
Duration of third stage of labour (min)	5.36 ± 2.86	4.11 ± 2.32	6

Table – 25 Comparison of duration of third stage of labour intra umbilical vein oxytocin of our study with other studies

Duration of third stage with intra umbilical vein oxytocin			
	Our study	**V. V. Reddy et al**	**Kemal Gungörduk et al**
Duration of third stage of labour (min)	5.82 ± 5.39	4.1 ± 2.4	4.5 ± 1.6

On comparing the duration of third stage of labour by different methods to other studies,

By expectant management:

Dogukan Yildlrlm et al and B. Thilaganathan et al did similar studies. The duration of third stage of labour by expectant management was similar to what we obtained in our study. [81, 82]

When oxytocin was given IM at the delivery of the anterior shoulder of the baby,

Maryam Kashanian et al and Manthan M. Patel et al got similar results to what we obtained in our study. [83, 84]

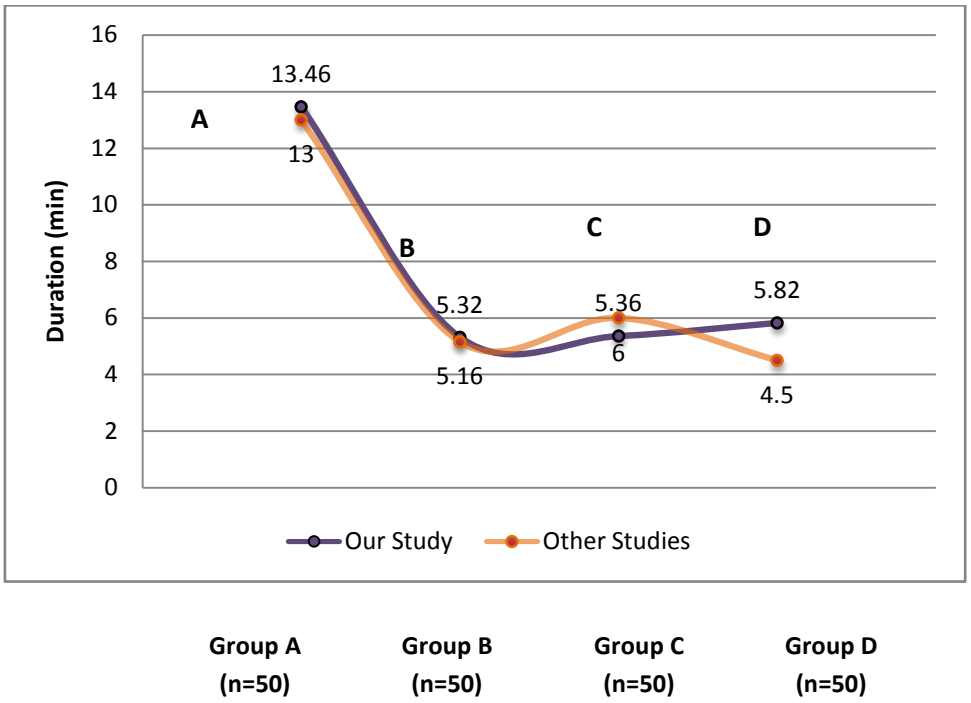
When oxytocin was given IM after the delivery of the baby

Dogukan Yildlrlm et al and B. Thilaganathan et al did such similar studies and got similar results to what we obtained. [81, 82]

When intra umbilical vein oxytocin was used to manage the third stage of labour,

B V. V. Reddy et al and Kemal Gungörduk et al got similar results when intra umbilical vein oxytocin was used. [66, 85]

Figure – 30 Comparison of duration of third stage of labour with all methods of our study with other studies



Our study was comparable to other studies in terms of the method and the duration of third stage of labour.

In our study, the duration of third stage was significantly longer in Group A as compared to all other groups. (p - <0.05)

All other groups were comparable in the duration of third stage of labour.

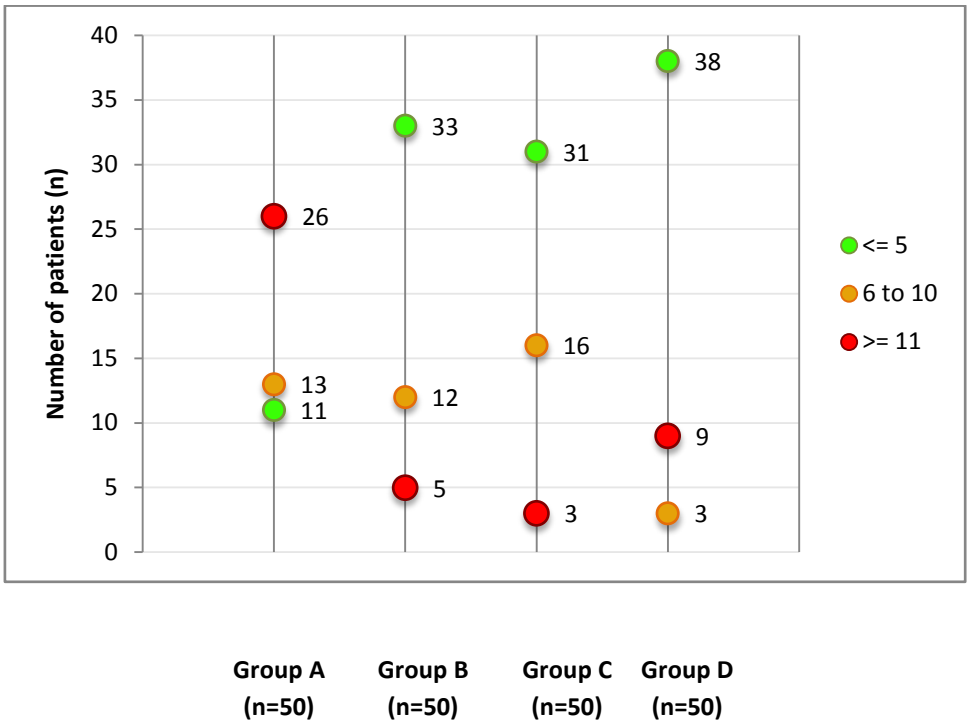
When we divided the third stage in 3 parts ($\leq$ 5 min, 6 – 10 min and $\geq$ 11 min),

We found out that > 60 % of the patients in Groups B, C and D had duration of $\leq$ 5 min, while only 22 % in Group A had that time.

In Group A, 52 % of the patients had a mean duration of $\geq$ 11 min.

In the following figure, green represents duration of ≤ 5 min in each group, yellow represents the duration between 6 to 10 min and red represents duration of ≥ 11 min.

Figure – 31 Number of patients in each group on subdivision of the third stage of labour

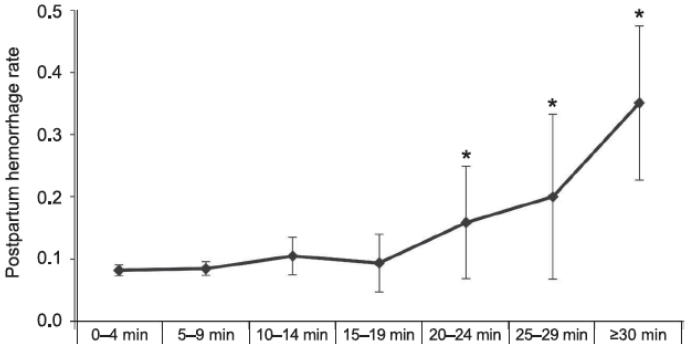


In a similar study by Niven Basyouni et al, they found that 27.5 % patients in the active management group and 97.5 % of patients in the expectant management group had the mean duration of third stage to be >11 min. [86]

- ✓ This tells us that the use of oxytocin at any time or the route of administration significantly reduces the duration of third stage of labour.

According to a study by Frolova et al, the incidence of PPH increases as the duration of third stage increases. [87]

Figure – 32 Comparison of incidence of PPH with duration of third stage in study by Frolova et al



	0–4 min	5–9 min	10–14 min	15–19 min	20–24 min	25–29 min	≥30 min
PPH rate†	8.2 (322/3,928)	8.5 (211/2,488)	10.5 (42/400)	9.3 (14/150)	15.9 (10/63)	20.0 (7/35)	35.1 (20/57)
OR (95% CI)‡	—	1.04 (0.87–1.24)	1.29 (0.92–1.80)	1.12 (0.64–1.95)	**2.04 (1.03–4.04)**	**2.68 (1.17–6.17)**	**5.76 (3.32–9.99)**
aOR (95% CI)‡	—	1.07 (0.89–1.29)	1.37 (0.97–1.91)	1.26 (0.72–2.23)	**2.38 (1.18–4.79)**	**2.77 (1.19–6.48)**	**6.09 (3.46–10.70)**

Fig. 1. Postpartum hemorrhage by third stage duration in minutes. *$P<.05$. †Postpartum hemorrhage (PPH) rate in each percentile category presented as percent (n/N). ‡Reference groups are all cases with third-stage duration shorter than the indicated time interval. aOR, adjusted for induction, prolonged first stage, prolonged second stage. OR, odds ratio; CI, confidence interval. *Bold* indicates statistically significant results.

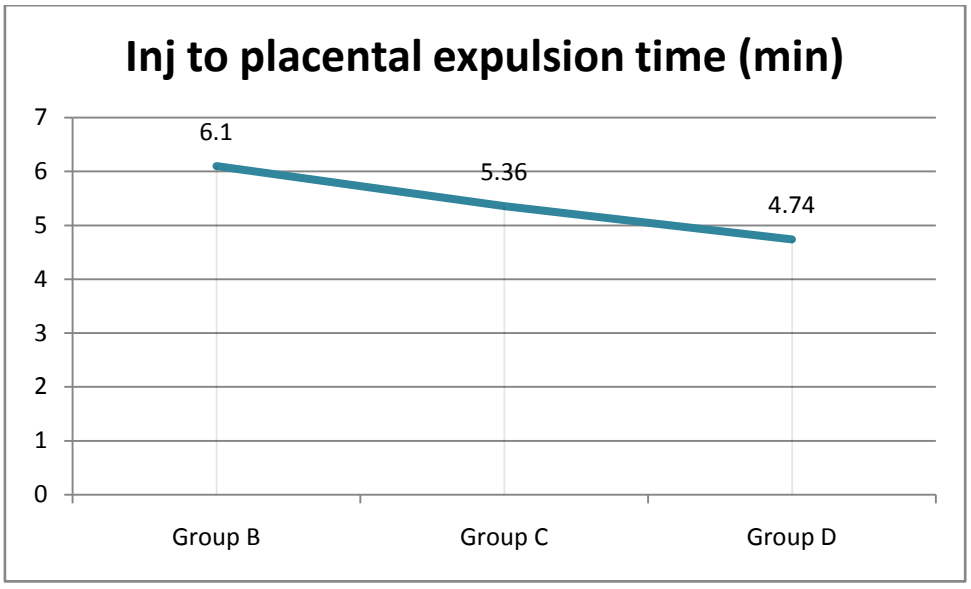
Frolova. Third Stage of Labor. Obstet Gynecol 2016.

So, the use of oxytocin reduces the risk of developing PPH by reducing the duration of third stage of labour.

– The time between oxytocin administration and placental expulsion was also measured.

  Group A patients did not receive oxytocin.

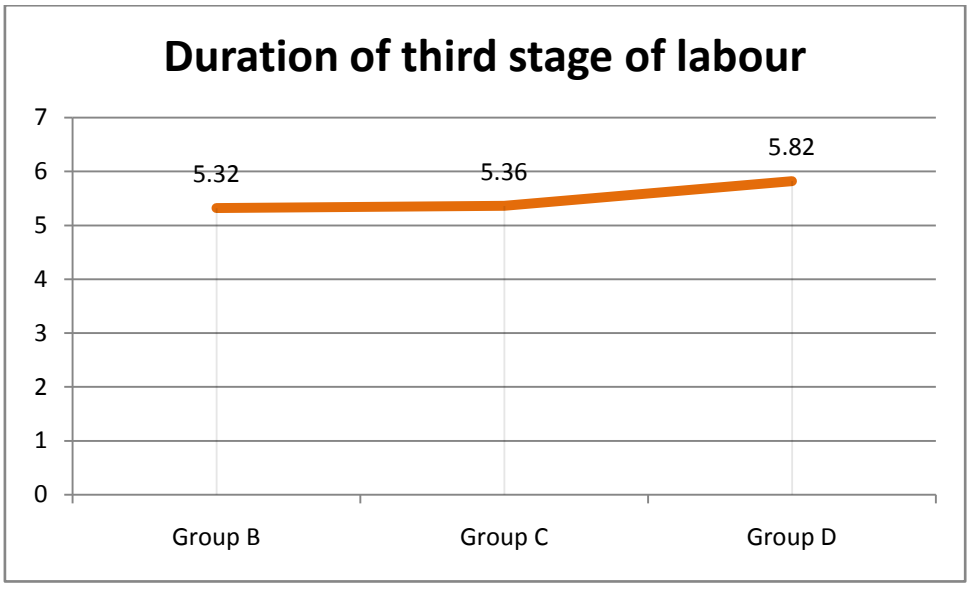
Figure – 33 Time between oxytocin injection and placental expulsion in all groups



The Injection to placental expulsion time was lowest in Group D and highest in Group B.

This might suggests that the local action of oxytocin via the umbilical vein, is more effective in separating the placenta compared to systemic action.

Figure – 34 Duration of third stage of labour in all groups receiving oxytocin



In Group C, the duration was same compared with the third stage of labour as the injection time and the time of delivery of the baby and the start of the third stage of labour was same.

But, the duration of third stage of labour was least with Group B and highest with Group D.

This might be like this because oxytocin was given before the baby delivery in Group B and the duration of the third stage started after the baby delivery. As the oxytocin was administered earlier than the baby delivery, the duration of third stage became shorter.

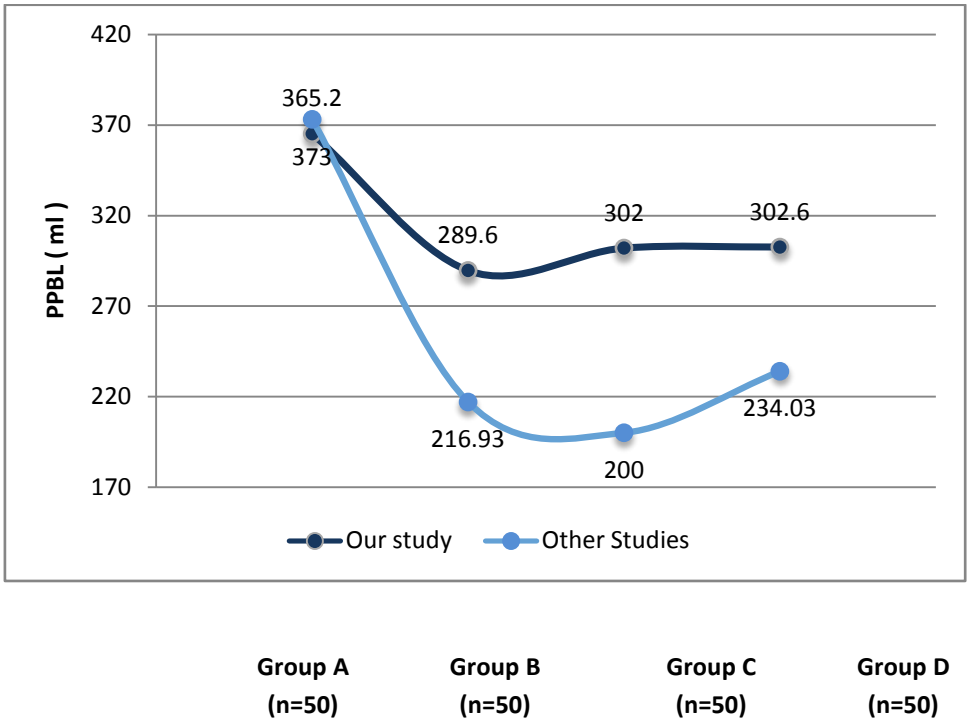
In Group C, the Inj. to placental expulsion time and the third stage was the same.

In Group D, the obstetrician had to take some time to administer oxytocin in the umbilical vein after the delivery of the baby due to clamping the cord, handing the baby to the paediatrician and identifying the umbilical vein. So the duration of third stage was more.

Post Partum Blood Loss

In this study, the PPBL was 365.20 ± 89.01 ml in Group A, 289.60 ± 41.01 ml in Group B, 302 ± 52.45 ml in Group C and 302.6 ± 78.58 ml in Group D.

Figure – 35 Comparison of PPBL in all groups of our study with other studies



Comparing it with other studies:

Table – 26 Comparison of PPBL with expectant management of our study with other studies

PPBL with expectant management			
	Our study	**Fehmida Tehseen et al**	**V. V. Reddy et al**
PPBL (ml)	365.2	276.51	373

Table – 27 Comparison of oxytocin was given with the delivery of the anterior shoulder of the baby of our study with other studies

PPBL with oxytocin was given with the delivery of the anterior shoulder of the baby			
	Our study	**Maryam Kashanian et al**	**Mohamadian S. et al**
PPBL (ml)	289.6	216.93	183.4

Table – 28 Comparison of PPBL with oxytocin was given after delivery of the baby of our study with other studies

PPBL with oxytocin was given after delivery of the baby			
	Our study	**Dogukan Yildlrlm et al**	**B. Thilaganathan et al**
PPBL (ml)	302	195.3	200

Table – 29 Comparison of PPBL with intra umbilical vein oxytocin of our study with other studies

PPBL with intra umbilical vein oxytocin			
	Our study	**Fehmida Tehseen et al**	**Kemal Gungörduk et al**
PPBL (ml)	302.6	234.03	195.3

Various studies by different authors have been done and the same pattern of post partum blood loss was found even though the actual blood loss was different.

Expectant management: Fehmida et al and V. Reddy et al [66, 88]

Inj Oxytocin IM at the time of delivery of the anterior shoulder of the baby: Maryam Kashanian et al and Mohamadian S et al [83, 72]

Inj Oxytocin IM after the delivery of the baby: Dogukan Yildirim et al and B. Thilanganathan et al [81, 82]

Inta Umbilical vein oxytocin after clamping the cord: Fehmida Tehseen et al and Kemal Gungörduk et al. [88, 85]

The cause of this is not clear.

One of the factors responsible can be the method used to assess the blood loss. Many of the studies used visual method or gravimetric methods of weighing soaked pads before and after. These methods are less accurate and they underestimate the blood loss. In our study, accurate collection of the post partum blood was done in a calibrated flask after draining the liquor and so the blood loss measured was more.

Another reason can be the difference in the genetic characteristics of the women in this study as compared with other women elsewhere.

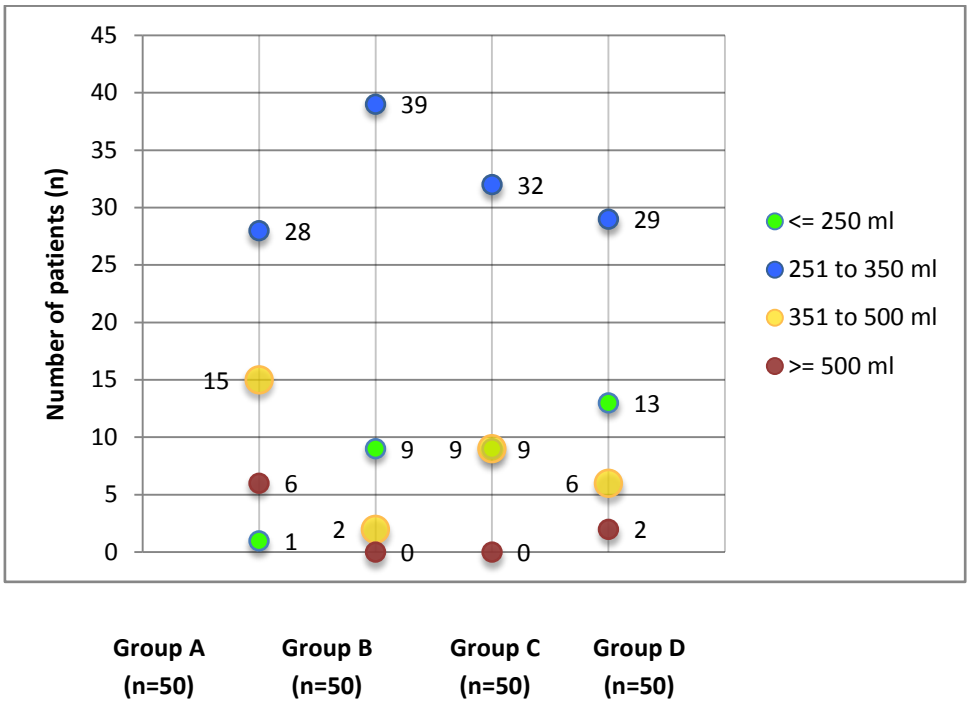
Still, further studies are needed to evaluate this difference.

– In our study, we also categorized PPBL into different groups.

Table - 16

Incidence according to different levels of mean PPBL in different groups					
PPBL (ml)	***Group A***	***Group B***	***Group C***	***Group D***	***Total***
≤ 250	1 (2%)	9 (18%)	9 (18%)	13 (26%)	32 (16%)
251 to 350	28 (56%)	39 (78%)	32 (64%)	29 (58%)	128 (64%)
351 to 500	15 (30%)	1 (2%)	9 (18%)	6 (12%)	31 (15.5%)
≥ 501	6 (12%)	1 (2%)	0 (0%)	2 (4%)	9 (4.5%)
N =	*50*	*50*	*50*	*50*	*200*

Figure – 36 Number of patients in each group on subdivision of PPBL



We found put that Group A had only 1 patient with PPBL ≤ 250 ml, while the other groups had more.

Group A also had more patients (21) with PPBL > 350 ml as compared to other groups (B – 2, C – 9, D – 8)

Except Group A, all other groups had comparable blood loss, which suggest the role of oxytocin in decreasing the blood loss.

– Reduction in PPBL with the use of oxytocin:

When oxytocin was not used in this study, the mean blood loss was 365.2 ml.

So, by using oxytocin:

Table – 30 Blood loss prevented by use of oxytocin in all groups

Blood Loss prevented by the use of oxytocin		
Intervention	***Blood loss prevented (ml)***	***Percentage (%)***
Inj. Oxytocin IM at the delivery of the anterior shoulder of the baby	75.6	20.70
Ink. Oxytocin IM after the delivery of the baby	63.2	17.31
Intra-umbilical vein oxytocin	62.6	17.14

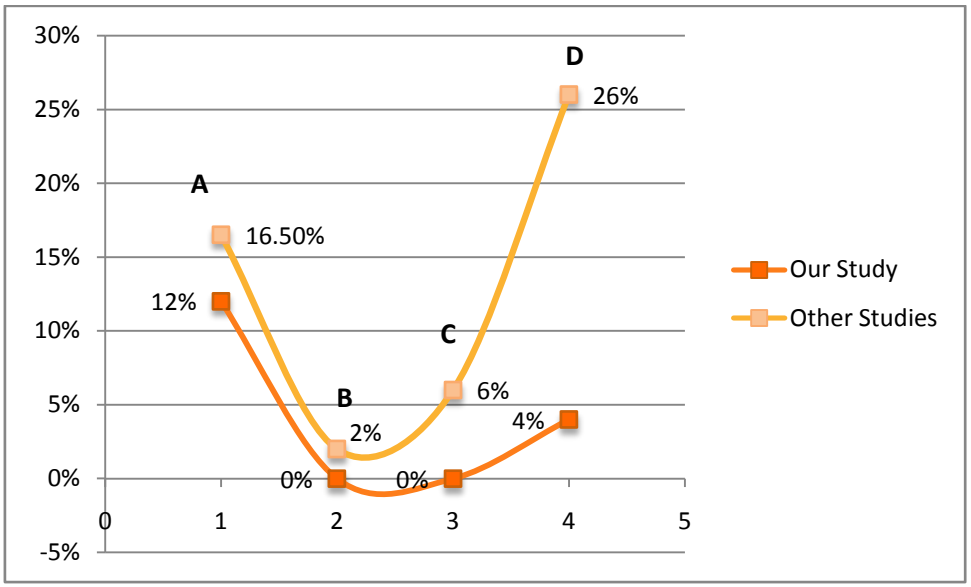
We can see that just by using oxytocin, we can prevent more than 15 % of the post partum blood loss depending on the route and timing of administration.

PPH

In our study, a total of 6 patients had PPH.

The incidence of PPH was 6 patients (12 %) in Group A and 2 patients (4 %) in Group D.

Figure – 37 Comparison of incidence of PPH by all methods in our study to other studies



A – Expectant Management

B – Oxytocin IM at the delivery of the anterior shoulder

C – Oxytocin IM after delivery of the baby

D – Intra umbilical vein oxytocin

Other similar studies:

In a study done by J Rogers et al, 16.5 % patients receiving the expectant management in the third stage of labour developed PPH. [37]

In a study done by Mohamadian S et al, out of 50 patients receiving oxytocin at the delivery of the anterior shoulder, 1 (2 %) patient developed PPH. [72]

In a study done by E. Oguz Orham et al, out of 150 patients who received oxytocin after the delivery of the baby, 6 % patients developed PPH. [71]

In a study by G Carroli et al, out of all patients who were given intra umbilical vein oxytocin, 26 % developed PPH. [89]

Begley et al. compared the active management and expectant management of the third stage of labour in a Cochrane database meta-analysis. This meta-analysis showed that although active management reduced mean blood loss and postpartum haemorrhage (> 500 ml), there was no statistically significant reduction in severe postpartum haemorrhage (> 1000 cc) for women at low risk for bleeding. [42]

The pattern of developing PPH was similar in other studies compared to ours, though the incidence in our study was less.

We found no incidence of PPH in Groups B and C. More studies with greater sample size are still needed to further evaluate this topic.

In our study, PPH was commonly encountered with expectant management and when oxytocin was used intra umbilically.

In the expectant management, no uterotonics are used and so the uterus takes time to contract resulting in more blood loss and eventually PPH.

When umbilical vein oxytocin is given, oxytocin acts locally at the placental site and takes time for diffusion through out the uterus. So the uterus takes time to contract, resulting in more blood loss and PPH.

Methods of oxytocin administration with the delivery of the anterior shoulder or just after delivery were safer in terms of developing PPH.

In India (WHO 2004) the 2004 incidence of PPH was 3.2/1000 live births & in 2005 4.5/1000 live births. [90]

This included patients who received the expectant management.

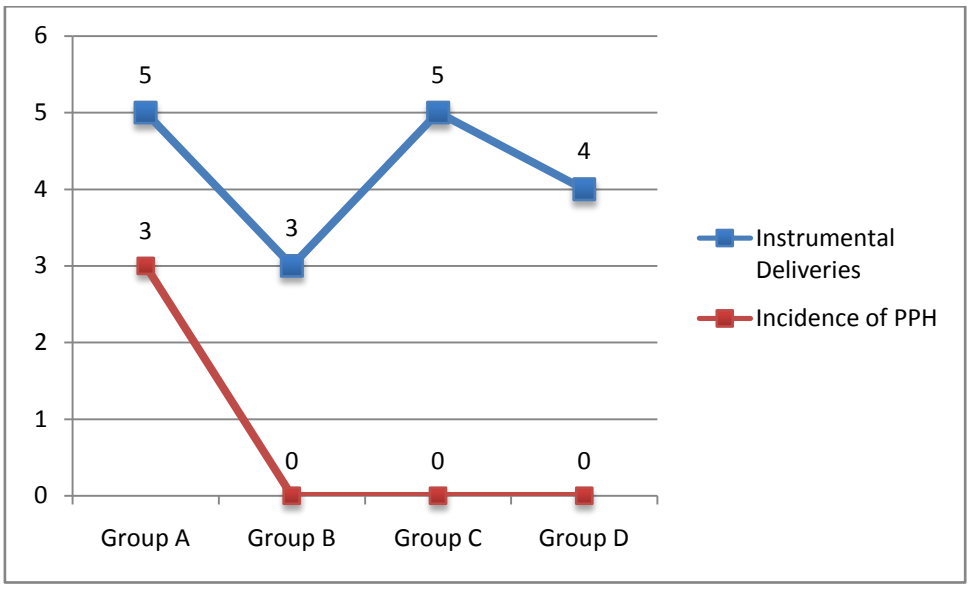
So just by using the active management of third stage of labour, we can further reduce the incidence of PPH.

Instrumental deliveries

In our study, 5 patients in Group A, 3 in Group B, 5 in Group C and 4 in Group D had instrumental deliveries.

Out of those patients, 3 (60 %) of patients in Group A developed PPH.

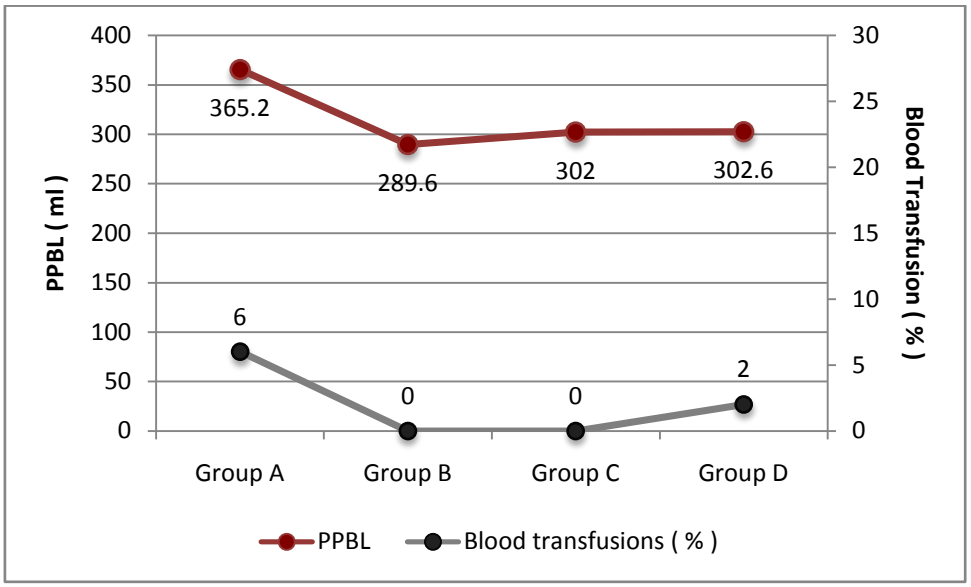
Figure – 38 Incidence of PPH in patients with Instrumental deliveries in all the groups



This suggests that whenever an instrumental delivery is performed, active management of the third stage of labour should be used.

Blood transfusions

Figure – 39 Comparison of PPBL and need for BT in all the groups



In our study, a total of 8 blood transfusions were required of which 6 were from Group A and 2 from Group D.

Those were the patients who developed PPH.

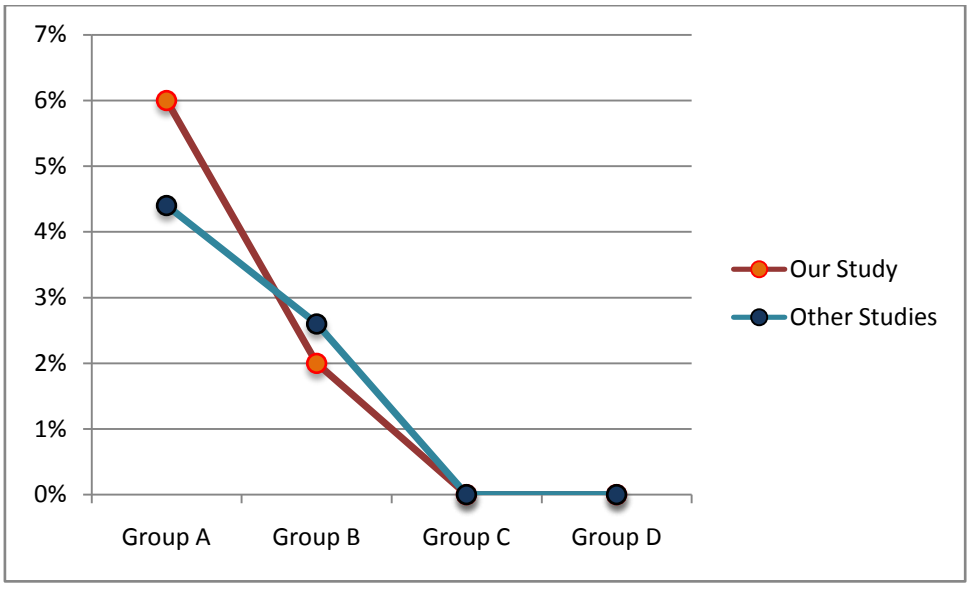
By this, we can suggest that by minimizing the blood loss and the subsequent development of PPH, we can reduce the number of blood transfusions and thus reduce the transfusion related complications and also reduce the burden on the people and the government especially in such rural set ups.

Retained Placenta

Table – 31 Comparison of incidence of retained placenta in all groups of our study to other studies

Comparison of incidence of retained placenta			
	Our Study	**Other Studies**	***Studies***
Group A	6 %	4.4 %	*Kemal Gungörduk et al*
Group B	2 %	2.6 %	*Fehmida Tehseen et al*
Group C	0 %	0 %	*Neerja Gupta et al*
Group D	0 %	0 %	*Neerja Gupta et al*

Figure – 40 Comparison of incidence of retained placenta by all methods in our study to other studies



In other similar studies,

Kemal et al found out the rate of incidence of retained placenta in expectant management was 4.4 %. [85]

Fehmida Tehseen et al found the rate of incidence of retained placenta to be 2.6 % when oxytocin IM was given with the delivery of the anterior shoulder of the baby. [88]

Neerja Gupta et al did a study comparing the incidence of retained placenta when oxytocin was given IM after the delivery of the baby and when oxytocin was given in the umbilical vein. She found that none of the groups had any incidence of retained placenta (0 %). [91]

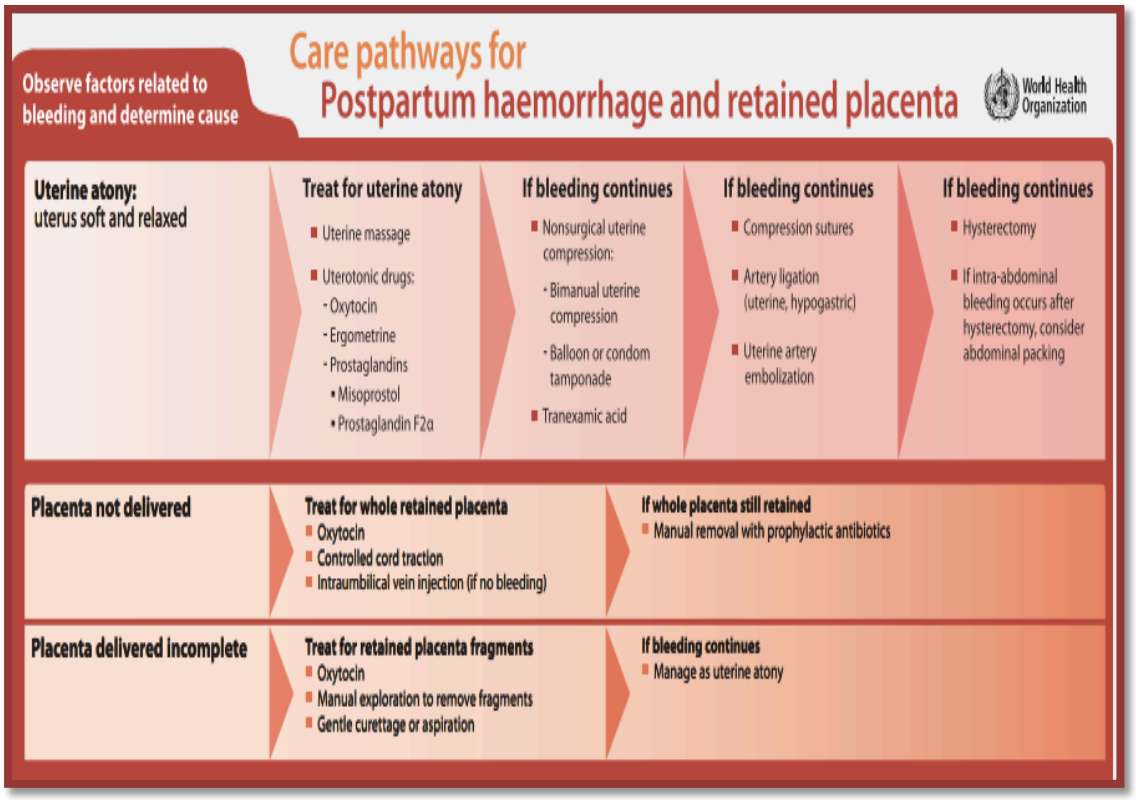
The results obtained in the other studies were similar to what we obtained in ours.

This suggests that retained placenta occurred more when expectant management and when oxytocin IM given at the time of delivery of anterior shoulder was used.

Intra umbilical vein oxytocin and oxytocin given after the delivery of the baby, were safer methods in regards of having retained placenta.

Patients developing PPH and retained placenta were managed according to the guideline provided by the WHO.

Figure – 4



All patients were properly monitored and no patients were ignored in the study.

All patients had adequate management of the complications.

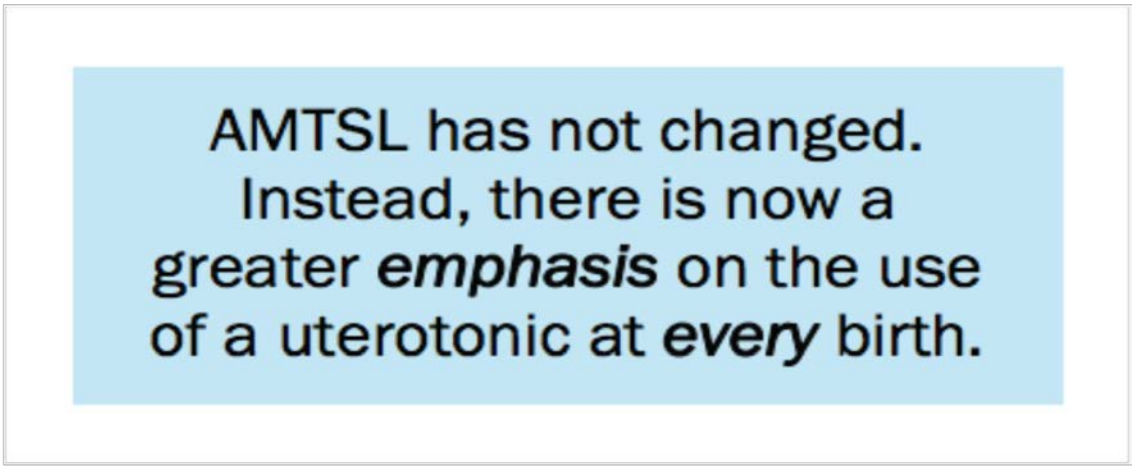
We had no mortality in the study.

Many studies have been done to find out the ideal method and different regulatory bodies have given various guidelines:

- The WHO AMTSL guidelines 2012 suggests the use of Inj oxytocin 10 IU IM after the delivery of the baby.
- The NICE guideline on intrapartum care (2014) makes the following recommendation "For active management, administer 10 IU of oxytocin by intramuscular injection with the birth of the anterior shoulder or immediately after the birth of the baby and before the cord is clamped and cut."
- ACOG suggests the use of Inj oxytocin 10-40 IU IV diluted in 500-1000 ml of NS at 500ml/hr after delivery of the baby.
- FOGSI recommends administration of uterotonic agent (preferably inj oxytocin 10 IU IM or 5 IU diluted in 500 ml NS or RL IV) within one minute of the delivery of the baby, after ruling out the presence of second fetus.

- The WHO has said:

Figure – 41 WHO recommendation for managing third stage of labour



Many bodies have gone against the concept of giving intravenous oxytocin as the side effects like hypotension, after pains, nausea, etc. increase the morbidity of the patients.

Different uterotonic agents are also being used in the management of third stage of labour but no ideal uterotonic has be isolated.

This topic is a matter of great importance and is under debate.

From this study, we hoped to find out a method which is most suitable so that women get the most benefit out of it and thus help in reducing the complications related to the third stage of labour.

Here, we would conclude that:

- ✓ Active management of labour should be used whenever possible.
- ✓ Expectant management should be used only if all other methods are contraindicated or not available.
- ✓ Of all the methods, the ideal choice is Inj. Oxytocin 10 IU IM after the delivery of the baby as it is least associated with PPBL, PPH and retained placenta.
- ✓ Inj. Oxytocin 10 IU IM at the delivery of the anterior shoulder of the baby is also equally effective, but only in the hands of a skilled obstetrician who is aware of the complications that might occur. Otherwise various complications are known to arise.
- ✓ Inj. Oxytocin diluted in NS in the umbilical vein after clamping the cord is a good method where fluid overload is contraindicated like in patients with heart disease.

SUMMARY

Post partum hemorrhage is the leading cause of maternal death worldwide, with an estimated mortality rate of 14000 per year or 1 maternal death in every 4 minutes. PPH occurs in 5% of all deliveries and is responsible for a major part of maternal mortality and morbidity. The majority of these deaths occur within first 4 hours of delivery, which indicates that they are a consequence of the third stage of labour.

Active management of the third stage of labor is an evidence-based, low-cost only intervention used to prevent postpartum hemorrhage. In response to the growing evidence supporting the use of active management of the third stage of labor for the prevention of postpartum haemorrhage, the International Confederation of Midwives (ICM) and the International Federation of Gynecology and Obstetrics (FIGO) issued a joint statement in November 2003. The joint statement promotes active management of labour to save mother's lives. International Confederation of Midwives and International Federation of Gynecology and Obstetrics further state: "Every attendant at birth needs to have the knowledge, skills and critical judgment needed to carry out active management of the third stage of labour for preventing postpartum haemorrhage"

Despite various guidelines directed at reducing the incidence of PPH, the incidence of PPH is still on the rise.

In our study, 4 methods in the management of the third stage of labour were compared, by dividing 200 patients in 4 groups (A, B, C and D) of 50 each.

The average age in our study was 24.5 ± 3.8 years.

The average parity was 1.36 ± 0.69.

The average gestational age was 39 week 1 day.

20.5 % patients were nulliparous and 79.5 % were multigravida patients.

There were a total of 17 un-booked and 183 booked patients.

The average hemoglobin was 10.58 ± 1.16 gm/dl.

All the groups were comparable in terms of age, parity, gestational age, booking status and occupation.

The mean hemoglobin level in all the groups was comparable. 10.77 gm/dl in Group A, 10.21 gm/dl in Group B, 10.65 gm/dl in Group C and 10.67 gm/dl in Group D.

The average fetal weight in all the groups was 2.86 kg in Group A, 2.87 kg in Group B, 2.83 kg in Group C and 2.87 kg in Group D. All the groups were comparable. ($p > 0.05$)

The pre delivery and post delivery mean pulse was measured in all the groups.

Among all the groups, there was a significant increase in the post delivery pulse rate in Groups A and D.

On measuring the pre delivery and post delivery mean blood pressure, no significant difference was found in any groups.

The mean duration of second stage of labour in Groups A, B, C and D was 23.92 min, 22.24 min, 22.58 min and 19.60 min respectively. So all the groups were homogenous in terms of the duration of second stage of labour.

The mean duration of third stage of labour in Groups A, B, C and D was 13.46 min, 5.32 min, 5.36 min and 5.82 min respectively.

There was significant difference in Group A compared with all other groups suggesting that the third stage was significantly longer in Group A. (p – 0.0001)

The post partum blood loss was maximum in Group A (365.20 ml), followed by Group D (302.60 ml), Group C (302 ml) and Group B (289.60 ml).

There was significant more blood loss with expectant management compared with the other groups. (p - <0.05)

PPH is the most dreadful complication of the third stage of labour and its incidence was the primary outcome in our study.

6 patients (12 %) in Group A and 2 patients (4 %) in Group D had PPH. There was no incidence of PPH in Groups B or C.

We also found that out of all the instrumental deliveries that were performed, 3 out of 5 patients (60 %) developed PPH indicating the need for active management with instrumental deliveries were performed. There was no incidence of PPH in other groups when instrumental deliveries were performed.

The incidence of retained placenta was 3 (6 %) in the group receiving expectant management and 1 (2 %) in the group receiving oxytocin IM at the delivery of the anterior shoulder of the baby. This complication carries the risk of developing PPH or

surgical intervention, which might cause infection and increase the morbidity of the patient.

Both these complications were managed by protocols laid down by the WHO and there was no mortality in our study.

Another outcome, which we measured, was the incidence of blood transfusion in all the groups (the mean hemoglobin was not statistically different in all groups).

Out of a total of 13 blood transfusions, 46.16 % were in Group A followed by 30.77 % in Group D, then 15.38 % in Group C and 7.69 % in Group B;

Suggesting that the more transfusions were needed in expectant management and intra umbilical vein oxytocin groups.

Overall, the most favorable results were obtained when Inj. oxytocin 10 IU was given IM after the delivery of the baby, as already suggested by the WHO.

CONCLUSION

⇒ The amount of post partum blood loss as well as the incidence of PPH and retained placenta is significantly more with the expectant management of third stage of labour.

So expectant management should ONLY be used when all other methods are contraindicated or when uterotonics are not available.

Active management of third stage of labour should be used wherever possible.

⇒ **The best method in managing the third stage is Inj. Oxytocin 10 IU IM after the delivery of the baby** as it has the least incidence of complications like PPH and retained placenta; and thus reducing the need for blood transfusion and its related complications.

⇒ Inj. Oxytocin 10 IU IM at the time of delivery of the anterior shoulder of the baby is also an equally good method but only if the skilled obstetrician is aware and prepared of the complications that might arise.

⇒ Inj. Oxytocin (10 IU diluted in 20 ml NS) in the umbilical vein after clamping the umbilical cord for the management of third stage of labour should be used only in cases where fluid overload is contraindicated like in patients of cardiac disease.

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LIST OF ABBREVIATIONS

ACOG – American College of Obstetricians and Gynecologists
AMTSL – Active Management of Third Stage of Labour
APH – Antepartum haemorrhage
BT – Blood Transfusion
CIAB – Cried immediately after birth
CCT – Controlled Cord Traction
Dl – Deciliter
EDD – Expected date of delivery
EMTSL – Expectant management of third stage of labour
FIGO – Federation Of International Of Gynecologists And Obstetricians
FOGSI – Federation of Obstetric and Gynaecological Societies of India
G – Grams
Hb – Haemoglobin
ICM – International Confederation of Midwives
IM – Intra-muscular
Inj - Injection
IUFD – Intra Uterine Fetal Death
IUVI – Intra Umbilical Vein Injection
IV – Intra-venous
Kg – Kilogram
LMP – Last Menstrual Period
MAP – Mean Arterial Pressure
MDG – Millennium Development Goal
Min –Minutes
Ml – Milliliter
MMR – Maternal Mortality Rate
NICE – National Institute for Clinical Excellence
P/V – Per Vaginum
PIH – Pregnancy Induced Hypertension
PPBL – Post Partum Blood Loss
PPH – Post Partum Haemorrhage
UVI – Umbilical Vein Injection
WHO – World Health Organization
Wt – Weight

ANNEXURE-I

PERFORMA FORMAT

S.B.K.S MEDICAL COLLEGE AND RSEARCH INSITUTE

DHIRAJ GENERAL HOPITAL

SUMANDEEP VIDHYAPEETH UNIVERSITY

TITLE OF THE STUDY : "**MANAGEMENT OF 3RD STAGE OF LABOUR: A COMPARISON OF DIFFERENT METHODS**"

A. BIODATA:

- Serial number
- Name of patient
- IPD number
- Age
- Booked/ Unbooked
- Occupation
- Educational status
- Socio economic status
- Duration of pregnancy

B. PRESENTING COMPLAINS: Months of amenorrhea / Labour pains / Leaking Per Vaginum .

C. MENSTRUAL HISTORY

- LMP
- EDD
- Gestational age (wks) (by LMP and Prev USG)

D. OBSTETRIC HISTORY

No of Pregnancy	Full Term / Pre-Term	Mode of delivery	BABY Alive/Still Birth/Expired Sex/Weight	Complication like PIH/Eclampsia/Anaemia etc.	History of previous PPH

F. Associated disease/ co- morbid condition/ past history:

G. Family history:

H. Personal History:

I. General physical examination:

J. Systemic Examination:

K. Obstetric Examination:

- **Per abdomen:**
  - Any Scar
  - Fundal Height By Palpation &SFH
  - Lie, Position & Presentation
  - Head Engaged / Floating
  - FHS
  - No. Of Uterine Contractions/Strength/Intensity.

L. STUDY DETAILS

Group	A	B	C	D

Sr. No.

Pre delivery P

BP

Post delivery P

BP

Duration of 2nd stage (min)

Duration of 3rd stage (min)

Injection of oxytocin to placental delivery time

(only in groups B, C, D)

Blood loss after delivery (ml)

Retained placenta (Y/N)

Manual removal of placentae (Y/N)

PPH (Y/N)

Use of additional uterotonics

Use for blood transfusion (Y/N)

INVESTIGATIONS

- BG
- Hb
- TLC
- RBS
- Urine: R/M,

- HIV, HbsAg, VDRL
- Sickling
- Any other investigations
    - PIH Profile
    - Hb Electrophoresis

OUTCOME OF CURRENT PREGNANCY

- Instrumentation
- Sex of child
- Wt of child
- Cried immediately after birth
- Fetal complication (if any)

ANNEXURE-II

PARTICIPANT INFORMATION SHEET

Title of the study:

MANAGEMENT OF 3RD STAGE OF LABOUR:

A COMPARISON OF DIFFERENT METHODS

Introduction

In this study, the third stage of labour of thepatients will be managed by different methods and data will be collected and analysed.

Study no: Date:

Invitation to participant

1. What is the purpose of this study?

The purpose of this study is to know which method in the management of third stage of labour is better than the others.

2. **Aim of Study:**

The aim is toevaluate methods like expectant management, Inj. oxytocin IM at the delivery of the anterior shoulder of the baby, Inj. oxytocin IM after the delivery of the baby & intra umbilical vein oxytocin (10 U diluted in 20 ml NS) after clamping the umbilical cord in the management of 3rd stage of labour and to find out the best method in the management amongst them.

3. Why have I been chosen?

Because you have come with labour pains and fit in the study criteria.

4. Do I have to take part?

It is totally voluntary but by your participation we will be able to compare different

methods and get data to be analyzed.

5. How long will the study last?

This study will last for 1 and ½ years.

6. What will happen to me if I take part?

This is a very beneficial study. Your labour will be monitored through out and different but recognized methods will be used in managing the third stage of labour and collected data will be evaluated.

7.What do I have to do?

You need to cooperate in our study till the end.

8. What is the drug being tested?

No drug is being tested.

9. What are the benefits of the study?

From this study, a better method in managing the third stage of labour will be found out and so it will decrease maternal morbidity and mortality.

10.Which are the other ways to manage third stage of labour? :

Other drugs like methyl ergometrine and prostaglandins can be used to manage the third stage of labour.

11. What are the side effects of the treatment received during the study?

There are no side effects

12. What if new information becomes available?

If any new information comes in between we will follow the new guidelines.

13. What happens when the study stops?

When the study stops, we will compile the data and statistically analyze the results

14. What if something goes wrong?

There is no harm as such.If anything goes wrong we will investigate and will provide

you treatment from our side.

15.Will my taking part be kept confidential?

Yes, patients' information will be kept confidential.

16. What else should I know?

You should be assured that the methods, which we are using, are well-established methods for managing the third stage of labour.By participating in our study, there is no additional risk caused to you.

17. What else can I know?

If you have anything in mind related to its advantages and disadvantages, you can ask about it without any hitch.

18.Who to call with questions?

Dr. JWAL M. BANKER

RESIDENT OBSTETRICS AND GYNECOLOGY,

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY,

SBKS MI&RC, PIPARIYA

Tal. Waghodia, Dist. Vadodara

Mob: - 9723453606

જોડાણ-૨

ભાગ લેનારનું માહિતીપત્રક

અભ્યાસનું શીર્ષક

પ્રસૂતિના ત્રીજા તબક્કાનું વ્યવસ્થાપનઃ

અલગ અલગ પદ્ધતિઓની તુલના

પરિચય

આ અભ્યાસમાં પ્રસૂતિના ત્રીજા તબક્કાના દર્દીઓનું વ્યવસ્થાપન અલગ અલગ પદ્ધતિઓથી કરવામાં આવશે એન માહિતી ભેગી કરવામાં આવશે એન તેનું વિશ્લેષણ કરવામાં આવશે.

અભ્યાસ ક્રમાંક : તારીખઃ

ભાગ લેનારનું આમંત્રણ

૧) આ અભ્યાસનો ઉદેશ્ય શું છે ?

આ અભ્યાસનો ઉદેશય એ જાણવાનો છે કે પ્રસૂતિના ત્રીજા પધ્ધતિ તબક્કાના વ્યવસ્થાપનમાં કઈ પદ્ધતિ બીજી પદ્ધતિઓ કરતાં વધુ સારી છે.

૨) અભ્યાસનો હેતુ :

આ અભ્યાસનો હેતુ એ છે કે અપેક્ષિત વ્યવસ્થાપન, બાળકના અગ્રવર્તી ખભાની ડિલિવરી વખતે ઈન્જેકશન ઓકસીટોસીન I.M., બાળકની ડિલિવરી પછી ઈન્જેકશન ઓકસીટોસીન I.M. અને ગર્ભનાળને કલેમ્પ કર્યા પછી ગર્ભનાળમાં ઓકસીટોસીન (10 U 20 મિલિ NS માં) પ્રસુતિના ત્રીજા તબક્કાના વ્યવસ્થાનનું મૂલ્યાંકન કરવું અને તે બધામાંથી વ્યવસ્થાપનની શ્રેષ્ઠ પદ્ધતિ કઈ છે તે જાણવું.

૩) મારી પસંદગી શા માટે ?

કારણ, તમે પ્રસુતિની પીડામાં આવ્યા છો અને અભ્યાસના માપદંડમાં બંધ બેસો છો.

૪) શું મારે આમાં ભાગ લેવો પડશે ?

આ તદન સ્વૈચ્છિક છે અને તમારા ભાગ લેવાથી અમે અલગ અલગ પદ્ધતિઓની તુલના કરી શકીશું અને વિશ્લેષણ માટેની માહિતી પ્રાપ્ત કરી શકીશું.

૫) આ અભ્યાસ કેટલો સમય ચાલશે ?

આ અભ્યાસ દોઢ વર્ષ ચાલશે.

૬) જો હું ભાગ લઉ તો મારી સાથે શું થશે ?

આ તદન લાભદાયી અભ્યાસ છે. તમારી પ્રસુતિ છેક સુધી નિયત્રિત કરવામાં આવશે અને અલગ અલગ પણ જાણકાર પદ્ધતિઓને પ્રસૂતિના ત્રીજા તબક્કાના વ્યવસ્થાપનમાં વાપરવામાં આવશે અને ભેગી કરેલી માહિતીનું મૂલ્યાંકન કરવામામ આવશે.

૭) મારે શું કરવાનું છે ?

તમારે આ અભ્યાસના અંત સુધી સહકાર આપવાનો છે.

૮) કઈ દવાની ચકાસણી કરવામાં આવશે ?

કોઇ દવાની ચકાસણી કરવામાં આવશે નહિ.

૯) આ અભ્યાસનો ફાયદો શું છે ?

આ અભ્યાસની પ્રસૂતિના ત્રીજા તબક્કાના વ્યવસ્થાપનની વધુ સારી પદ્ધતિ શોધવામાં આવશે અને તે માતાની રોગિષ્ઠતા અને મુત્યુદરમાં ઘટાડો કરશે.

૧૦) પ્રસુતિના ત્રીજા તબક્કાના વ્યવસ્થાપન માટેના બીજા કયા રસ્તાઓ છે ?

બીજી દવાઓ જેમ કે મિથાઈલ અગેમિટ્રીન અને પ્રોસ્ટાગ્લાન્ડીન પ્રસૂતિના ત્રીજા તબક્કાના વ્યવસ્થાપન માટે વાપરી શકાય છે.

૧૧) આ અભ્યાસ દરમિયાન મેળવેલી સારવારની આડઅસરો કઇ છે ?

કોઇ આડ અસરો નથી .

૧૨) જો નવી માહિતી પ્રાપ્ત થાય તો ?

જો આ દરમિયાન નવી માહિતી પ્રાપ્ત થાય તો અમે નવી માર્ગદર્શિકાને અનુસરીશું.

૧૩) અભ્યાસ બંધ થાય ત્યારે શું થશે ?

જયારે અભ્યાસ બંધ થશે. તો અમે, મેળવેલી માહિતીનું સંકલન કરીશું અને પરિણામોનું આંકડીકીય રીતે વિશલેષણ કરીશું.

૧૪) જો કંઈક રાબ થાય તો .?

આમ, આમાં કોઈ નુકશાન નથી. પણ ને કંઈક ખરાબ થાય તો અંગે તપાસ કરીશુ અને અમારા તરફથી તમને સારવાર પૂરી પાડીશું.

૧૫) શું મારું ભાગ લેવું એ ખાનગી રાખવામાં આવશે ?

હા, દર્દીઓની માહિતી ખાનગી રાખવામાં આવશે.

૧૬) મારે બીજુ શું જાણવું જોઈએ ?

તમને એ ખાતરી હોવી જોઈએ કે જે પદ્ધતિઓ અમે વાપરી રહ્યા છીએ તે પ્રસુતિના ત્રીજા તબક્કાના વ્યવસ્થાપન માટેની સુસ્વીકૃત પદ્ધતિઓ છે. આ અભ્યાસમાં ભાગ લેવાથી તમને કોઇ વધારાનું નુકશાન થતું નથી.

૧૭) બીજું હું શું જાણી શકું ?

જો તમારા મગજમાં આના ફાયદા અને ગેરફાયદા સબંધિત કોઈ શંકા હોય તો તમે વિના સંકોચ પૂછી શકો છો.

૧૮) પ્રશ્નો કોને પૂછવા ?

ડૉ. જવલ એમ. બેન્કર

રેસીડેન્ટ ઓબ્સ્ટેટ્રીકસ અને ગાયનેકોલોજી, સોબ્સ્ટીકસ અને ગાયનેકોલોજી વિભાગ, એસ.બી.કે એસ એમ આઇ અને આર.સી, પિપરિયા મો ૯૭૨૩૪૫૩૬૦૬.

अनुबंध–II

भागीदारी सूचना पत्र

अध्ययन शीर्षक:

लेबर के तीसरे चरण का प्रबंधन : विभिन्न तरीको की तुलना

परिचय:

इस अध्ययन में श्रम के तीसरे चरन को विभन्न तरीको से प्रबंधन किया जाएगा और डाटा एकत्र और विश्लेषण किया जाएगा ।

अध्ययन संख्या

दिनांक:

प्रतिभागी को आमंत्रण

१) इस अध्ययन का उदेस क्या है ?

इस अध्ययन का उदेश्य यह जानना है कि लेबर के तीसरे चरण के प्रबंधन में कोन सी विधि दूसरों से बेहतर हैं ।

२) अध्ययन का उदेश्य

उदेश्य अपेक्षाकृत प्रबंधन इक जैसे तरीको का मूल्यांकन करना है । ओक्सीटीसिन आइएम की बच्चे के पर्वकाल सधे सी डिलीवरी पर, इज श्रम के तीसरे चरण के प्रबंधन में गर्भताल गर्दन को क्लेम्प करजे और उनके बीच प्रबंधन में सवोत्तम विधि जानने के लिए, शिशु के वितरण के बाद ओक्सीटीसिन आइएम और इंट्रा अनलाइकल नस ओक्सीटीसिन (२० एमएल एनएस में पतला)

३) मुझे क्यों चुना गया है ?

क्योंकि आप लेबर पेन के साथ आए है और और अध्ययन मापदंड में फिट हैं ।

४) क्या मुझे भाग लेना होगा ?

यह पूरी तरह से स्वैच्छिक है लेकिन आपकी सहभागिता से हम विभिन्न तरीको की तुलना करने और डेटा विश्लेषण करने में सक्षम होगें ।

५) अध्ययन कब तक रहेगा ?

यह अध्ययन $1_{1/2}$ साल तक चलेगा

६) अगर में भाग लेता हूँ तो मेरे साथ क्या होगा ?

यह एक बहुत ही लाभकारी अध्ययन है आपके श्रम की निगराजी की जाएगी और अलग अलग लेकिन मान्यता प्राप्त तरीको का उपयोग श्रम के तीसरे चरण के प्रबंधन में किया जाएगा और एकत्र आंकडो का मूल्यांकन किया जाएगा ।

७) मुझे क्या करना है ?

आपको अंत तक अपने अध्ययन में सहयोग करने की जरुरत है ।

८) क्या दवा का परीक्षण किया जा रहा है ?

कोई दवा का परीक्षण नही किया जा रहा ।

९) अध्ययन का क्या लाभ है ?

इस अध्ययन से, श्रम के तीसरे चरण के प्रबंधन में एक बेहतर तरीके का पता चलेगा और इससे मातृत्व और मृत्यु दर कम हो जाएगी ।

१०) श्रम के तीसरे चरण के प्रबंधन के अन्य तरीके कौन से है ?

श्रम के तीसरे चरण के प्रबंधन के लिए मिथाइल एगमिट्रेरिज और प्रोस्टाग्रेडीन जैसी अन्य दबाईया का इस्तेमाल किया जा सकता है ।

११) अध्ययन के दौरान प्राप्त उपचार के दुष्प्रभाव क्या हैं ।

कोई साइड इफेकट नहीं है ।

१२) यदि नई जानकारी उपलब्ध है तो क्या होगा ?

अगर किसी भी नई जानकारी के बीच में नाता है, तो हम नए नि धिानिदेशी का पालन करेंगे ।

१३) जब अध्ययन बंद हो जाता है तो क्या होता है ?

जब अध्ययन बंद हो जाता है तो हम डेटा संकलित करेंगे और परिणामो का सारन्यकीय रुप से विश्लेषण करेंगे ।

१४) अगर कुछ गलत ही जाए तो क्या होगा ?

इस तरह के रुप में कोइ नुकसान नही है यदि कुछ गलत हो जाता है तो हम जाँच केरेंगे और हम आपका हमारी तरफ से इलाज करेंगे ।

१५) क्या मेरी हिस्सेदारी गोपनीय रखी जाएगी ?

हाँ, रोगियों की जानकारी गोपनीय रखी जाएगी ।

१६) मुझे और क्या पता होना चाहिए ?

आपको आक्ष्वास्न दिया जाना चाहिए कि हम जो तरीको का उपयोग कर रहे है वे श्रम के तीसरे चरण के प्रबंधन के लिए अच्छी तरह से स्थापित तरीके है । हमारे अध्ययन में भाग लेने से आप के लिए कोई अतिरिक जोखिम नही होता है ।

१७) और मैं क्या जान सक्ता हूँ ?

यदि आप अपने कायदे और नुकशान से संबधित कुछ भी मन में हैं, तो आप इसके बारे में किसी भी प्रकार का हिचकिच के बिना पूछ सकते है ।

१८) प्रश्न किससें पूछे ?

डॉ. जवल बैकर

आवासीय ओक्स्टेट्रिक्स ओर माईकोलेजी, ओब्स्टेक्सि और माईनेकोलजी विभाग, एसबीकेएस एमआई अरसी, पीपरिया , वाघोडिया, जि. वडोदरा. 9723453606.

ANNEXURE-III

Sumandeep Vidyapeeth University

Piparia, Ta. Waghodia, Dist. Vadodara. Pin 391760

Informed Consent Form (ICF) for Participants in Research Programmes involving studies on human beings:

Study title:**MANAGEMENT OF 3RD STAGE OF LABOUR: A COMPARISON OF DIFFERENT METHODS**

Study Number: SVU/SBKS/ /2016-____

Participants Initials: _____

Participant's Name _____

Date of Birth / Age _____ (Years)

1. I confirm that I have read and understood the information sheet dated _____ for the above study and have had the opportunity to ask questions. [ ]

2. I understand that my participation in the study is voluntary and that I am free to withdraw at any time, without giving any reason, without my medical care or legal rights being affected. [ ]

3. I understand that the investigator of this study, others working on the investigator's behalf, the Ethics Committee and the regulatory authorities will not need my permission to look at my health records, both in respect of the current study and any further research that may be conducted in relation to it, even if I withdraw from the study. I agree to this access. However, I understand that my identity will not be revealed in any information related to third party or published. [ ]

4. I agree not to restrict the use of any data or results that arise from this study provided such a use is only for scientific purpose(s). [ ]

5. I agree to take part in the above study. [ ]

Signature (or thumb impression) of the participants /
Legally acceptable representative _____
Signatory's Name _____ Date _____
Signature of the investigator _____ Date _____
Study Investigator's Name _____
Signature of the impartial witness _____
Date _____
Name of the witness _____

પરિશિષ્ટ-૩

સુમનદીપ વિદ્યાપીઠ

પિપરીયા,તાલુકા વાઘોડીયા, જી.વડોદરા-૩૯૧૭૬૦

જે સંશોધન પ્રોગ્રામ્સમાં માનવો પરના અભ્યાસો સમાયેલ હોય તેમાં ભાગ લેવા માટે સૂચિત સંમતિ પત્રક (આઇસીએફ)

અભ્યાસનું શીર્ષક

"પ્રસૂતિ પૂર્વેના ક્લિનિકમાં આવતી સગર્ભા મહિલાઓમાં બાળકના જન્મ પૂર્વેના જાતિ / લિંગ પરીક્ષણ અને પીસીપીએનડીટી અધિનિયમ વિશેની જાગૃતિ અને વલણ"

અભ્યાસ ક્રમાંક : એસવીયુ/ એસબીકેએસ/ /૨૦૧૭ _____

સહભાગીની ટૂંકી સહી : _____

સહભાગીનું નામ : _____

જન્મ તારીખ / ઉંમર _____ (વર્ષ)

હું પુષ્ટી આપું છું કે મે ઉપરોકત અભ્યાસ માટેનું માહિતી પત્રક વાંચ્યુ અને સમજયું છે તથા મને પ્રશ્નો પૂછવાની તક મળી છે.

હું સમજું છું કે અભ્યાસમાં મારી સહભાગિતા સ્વૈચ્છિક છે અને તે કે હું કોઇ પણ સમયે કોઇ પણ કારણ આપ્યા વિના મારી તબીબી સંભાળ અથવા કાનૂની અધિકારોને અસર કર્યા વિના નીકળી જવા માટે મુકત છું.

હું સમજુ છું કે તપાસકર્તા અને તપાસકર્તા વતી કામ કરતા અન્યો, નૈતિક સમિતિ અને નિયમન સત્તાઓને મારા તબીબી રેકોર્ડસ જોવા માટે હાલના અભ્યાસના સંદર્ભમાં તથા પછીના કોઇ પણ સંશોધનમાં જે તે સંબધી હોય, હું અભ્યાસમાંથી નીકળી જાઉ તોયે મારી મંજુરીની જરૂર રહેશે નહી. હું આ અભિગમન માટે સહમત છું. તેમ છતાં, હું સમજું છું કે ત્રીજા પક્ષોને રવાના કરવામાં આવનાર અથવા પ્રકાશિત કોઇપણ માહિતીમાં મારી ઓળખ પ્રગટ કરવામાં આવશે નહી.

કોઇ પણ ડેટા અથવા પરિણામો જે આ અભ્યાસમાંથી ઉદભવે તેનો ઉપયોગ મર્યાદિત નહી કરવા હું સહમત થાઉ છું તે શરતે કે આવો ઉપયોગ માત્ર વૈજ્ઞાનિક હેતુ (ઓ) માટે થાય.

અભ્યાસની પ્રકૃતિ અને પરિણામ વિશે મારી પોતાની ભાષામાં મને સંપૂર્ણપણે જાણકારી આપવામાં આવી છે અને હું ઉપરના અભ્યાસ માટે મારી પૂર્ણ અને મુકત સંમતિ આપું છું.

સહભાગી / કાનૂની રીતે માન્ય

પ્રતિનિધિની સહી (અથવા અંગુઠાનું નિશાન) _____

સહી કરનારનું નામ _____ તારીખ _____

તપાસકર્તાની સહી _____ તારીખ _____

અભ્યાસ તપાસકર્તાનું નામ _____

તારીખ _____

નિષ્પક્ષ સાક્ષીની સહી _____

સાક્ષીનું નામ _____

अनुलग्न्क-३

सुमनदीप विधापीठ
पिपरीया,तहसील-वाघोडिया, जिला-वडोदरा-३९१७६०
मानवो पर अध्ययन से जुडे अनुसंधान कार्यक्रमो मे प्रतिभागियो के लिए
सूचित सहमति प्रपत्र (आईसीएफ)

अध्ययन का शीर्षक :

"एटीनेटल किलनिक मे उपस्थित गर्भवती महिलाओं मे जन्म से पहले लिंग निर्धारण और पीसीपीएनडीटी अधिनियम के बारे मे जागरुकता एवं नजरीया"

अध्ययन संख्या : एसवीयू / एसबीकेएस / /२०१७

प्रतिभागी के आधाक्षर : _____

प्रतिभागी का नाम : _____

जन्म तिथि / आयु _____ (वर्ष)

मैं पुष्टि करता हूँ कि मैंने ऊपर के अध्ययन के लिए जानकारी पत्र पढ लिया है और समझ लिया है और मुझे सवाल पूछने का अवसर मिला है ।

मैं समझता हूँ कि अध्ययन मे मेरी भागीदारी स्वैच्छिक है और मे किसी भी समय, बिना किसी कारण के अपने चिकित्सकीय देखभाल या कानूनी अधिकारो को प्रभावित किए बिना अपना नाम वापस लेने के लिए स्वतंत्र हूँ ।

- मैं समझता हूँ कि इस अध्ययन के जाँचकर्ता, जाँचकर्ता की और से काम करने वाले, आचार समिति और नियामक प्राधिकारियों को मौजूदा अध्ययन के संबंध में और अन्य शोध के लिए, मेरे स्वास्थय रिकोर्ड को देखने के लिए मेरी अनुमति की आवश्यकता नही होगी, वर्तमान अध्ययन और किसी भी अन्य शोध के संबंध मे दोनो, जो कि इसके संबंध मे आयोजित किया जा सकता है, भले ही मैं अध्ययन से नाम वापस ले लूँ । मे इस अभिगमन से सहमत हुँ । हालांकि, मैं समझता हू कि मेरी पहचान तीसरे पक्ष से संबंधित किसी भी जानकारी या प्रकाशन में प्रकाशित नही होगी।
- मैं इस अध्ययन से मिलनेवाले किसी भी डाटा या परिणामो के उपयोग को प्रतिबंधित करने के लिए सहमत नही हूँ लेकिन ऐसे प्रयोग केवल वैज्ञानिक उदेश्य (यों) के लिए है ।
- अध्ययन की प्रकृति और नीतीजे के बारे मैं मुझे अपनी भाषा मैं पूरी तरह से सूचित किया गया है और मैं उपरोक अध्ययन के लिए अपनी पूर्ण स्वतंत्र सहमति देता हुँ ।

प्रतिभागी के हस्ताक्षर (या अंगुठे का निशान)
कानूनी रुप से स्वीकार्य प्रतिनिधि _____
हस्तक्षरकर्ता का नाम _____ दिनांक _____
जाँचकर्ता के हस्ताक्षर _____ दिनांक _____
अध्ययन जाँचकर्ता का नाम _____
दिनांक _____
निष्पक्ष ग्वाह के हस्ताक्षर _____
गवाह का नाम _____

Group A

Sr. No.	Age	B/UB	Occupation	Edu	Socio-Eco	Duration	Complain	Gest Age		Obstetric History						Per Abdomen					Pre Delivery				Post Delivery				2nd Stage (min)	3rd Stage (min)	Augmentation	Aug time (min)	PPBL (ml)	Retained PI (Y/N)	Manual Removal (Y/N)	PPH (Y/N)	Add Uterotonic	BT	Epi/PT	Instrumentation	Sex	Wt	CIAB	Fetal compli	BG	Hb
								LMP	USG	No. of children	FT/PT	Mode	Baby L/D	Complication	H/O PPH	Fun Ht	Contraction	Presentation	Head (fifth)	FHS	P	BP sys	BP dias	Mean BP	P	BP sys	BP dias	Mean BP																	
1	25	B	housewife	11th	low	9 months	Labour pain	37 w 1 d	35 w 2 d	1	FT	VD	L	N	N	32	3	V	3	Reg	82	110	74	86.00	88	116	76	89.33	22	4	N	NAD	260	N	N	N	N	N	NAD	N	M	2.4	Y	N	O	10.5
2	23	B	housewife	8th	low	9 months	Labour pain	37 w 3 d	36 w 2 d	0						33	3	V	3	Reg	74	114	68	83.33	84	120	70	86.67	34	12	Y	128	310	N	N	N	N	N	NAD	N	M	2.9	Y	N	B	11.2
3	28	B	housewife	7th	low	9 months	Labour pain	38 w 5 d	38 w 3 d	2	FT	VD	L	N	N	32	3	V	2	Reg	76	120	66	84.00	82	116	68	84.00	25	5	N	NAD	330	N	N	N	N	N	NAD	N	M	2.6	Y	N	O	11.1
4	20	B	housewife	6th	low	9 months	Labour pain	39 w 2 d	38 w 6 d	1	FT	VD	L	N	N	33	3	V	3	Reg	80	114	74	87.33	86	120	72	88.00	26	8	N	NAD	330	N	N	N	N	N	NAD	N	F	2.6	Y	N	A	11.2
5	23	B	housewife	9th	low	9 months	Labour pain	40 w 1 d	39 w 4 d	0						34	3	V	1	Reg	78	108	70	82.67	84	118	74	88.67	45	24	N	NAD	420	N	N	N	N	N	PT	N	M	2.8	Y	N	O	12.4
6	20	B	housewife	4th	low	9 months	Labour pain	38 w 3 d	37 w 4 d	1	FT	VD	L	N	N	32	3	V	3	Reg	78	112	68	82.67	80	116	72	86.67	34	14	N	NAD	310	N	N	N	N	N	NAD	N	F	2.9	Y	N	B	10.3
7	32	B	housewife	9th	low	9 months	Labour pain	39 w 5 d	36 w 4 d	2	FT	VD	L	PIH	N	33	3	V	4	Reg	80	122	80	94.00	88	128	84	98.67	24	7	N	NAD	310	N	N	N	N	N	NAD	N	F	2.9	Y	N	B neg	10.3
8	28	B	Labourer	8th	low	9 months	Labour pain	37 w 1 d	37 w	1	FT	VD	L	N	N	32	3	V	5	Reg	84	106	66	79.33	88	110	70	83.33	36	18	N	NAD	440	N	N	N	N	N	E	V	M	2.9	Y	N	B	10.6
9	32	B	housewife	7th	low	9 months	Labour pain	38 w 5 d	36 w 1 d	3	FT	VD	L	N	N	33	3	V	3	Reg	86	98	60	72.67	116	104	62	76.00	14	5	N	NAD	320	N	N	N	N	N	N	N	M	2.6	Y	N	B	10.5
10	25	B	housewife	5th	low	9 months	Labour pain	41 w 3 d	39 w 5 d	0						34	3	V	3	Reg	80	110	72	84.67	82	114	70	84.67	32	34	N	NAD	530	Y	Y	Y	Y	Y	E	N	F	3.1	Y	N	B	7.2
11	20	B	housewife	9th	low	9 months	Labour pain	37 w 3 d	37 w 1 d	1	FT	VD	L	N	N	32	3	V	2	Reg	74	118	76	90.00	85	122	78	92.67	40	22	N	NAD	530	N	N	Y	N	Y	NAD	N	F	3.1	Y	N	B	9.6
12	20	U	labourer	8th	low	9 months	Labour pain	40 w 3 d		0						32	3	V	1	Reg	76	120	80	93.33	86	126	84	98.00	16	8	Y	138	480	N	N	N	N	N	NAD	N	M	2.6	Y	N	O	11.1
13	30	B	housewife	9th	low	9 months	Labour pain	39 w 5 d	38 w 4 d	2	FT	1 VD 1 CS	1 L 1 D	PIH	N	33	3	V	1	Reg	84	116	78	90.67	82	122	80	94.00	12	6	N	NAD	260	N	N	N	N	N	NAD	N	F	2.8	Y	N	A	8.6
14	28	B	housewife	9th	low	9 months	Labour pain	37 w 4 d	36 w 5 d	2	FT	VD	L	N	N	31	3	V	2	Reg	80	122	74	90.00	86	128	74	92.00	16	9	N	NAD	250	N	N	N	N	N	NAD	N	F	3.1	Y	N	B	9.3
15	20	B	housewife	9th	low	9 months	leaking PV	36 w	36 w 1 d	1	FT	VD	L	N	N	32	3	V	3	Reg	82	116	68	84.00	84	120	70	86.67	32	20	N	NAD	450	N	N	N	N	N	NAD	N	M	2.7	Y	N	A	8.4
16	24	B	housewife	9th	low	9 months	Labour pain	37 w 6 d	37 w 3 d	2	FT	VD	L	N	N	33	3	V	3	Reg	76	110	68	82.00	80	118	72	87.33	11	20	N	NAD	350	N	N	N	N	N	NAD	N	M	3.1	Y	N	B	9.8
17	22	B	housewife	10th	low	9 months	Labour pain	40 w 3 d	38 w 5 d	1	FT	VD	L	N	N	33	3	V	4	Reg	90	120	70	86.67	94	128	72	90.67	26	16	N	NAD	320	N	N	N	N	N	NAD	N	F	2.9	Y	N	B	11.4
18	23	B	housewife	6th	low	9 months	Labour pain	38 w 5 d	36 w 4 d	1	FT	VD	L	N	N	32	3	V	4	Reg	80	112	84	93.33	84	118	74	88.67	24	13	N	NAD	270	N	N	N	N	N	NAD	N	F	2.5	Y	N	B	12.1
19	20	B	housewife	9th	low	9 months	Labour pain	39 w 6 d	37 w 3 d	0						32	3	V	4	Reg	90	110	72	84.67	104	122	74	90.00	55	38	N	NAD	610	Y	N	Y	Y	Y	E	F	F	3.2	N	BA	O	9.4
20	31	B	housewife	8th	low	9 months	Labour pain	40 w 1 d	39 w 3 d	1	FT	VD	L	N	N	33	3	V	3	Reg	82	116	74	88.00	84	120	76	90.67	28	8	N	NAD	340	N	N	N	N	N	NAD	N	F	2.7	Y	N	A	10.5
21	29	U	housewife	9th	low	9 months	Labour pain	38 w 5 d		2	FT	VD	L	N	N	32	3	V	2	Reg	78	120	82	94.67	82	124	82	96.00	18	14	N	NAD	420	N	N	N	N	N	PT	N	F	3.3	Y	N	O	10.4
22	30	B	housewife	9th	low	9 months	Labour pain	37 w 3 d	36 w 6 d	3	FT	VD	2 L 1 D	N	N	32	3	V	1	Reg	74	110	68	82.00	90	116	72	86.67	11	8	N	NAD	350	N	N	N	N	N	N	N	F	3.1	Y	N	O	10.9
23	30	B	housewife	10th	low	9 months	Labour pain	38 w 4d	36 w 5 d	2	FT	VD	L	N	N	32	3	V	1	Reg	80	122	80	94.00	84	128	80	96.00	6	16	N	NAD	310	N	N	N	N	N	NAD	N	F	3.1	Y	N	O	12.5
24	25	B	labourer	9th	low	9 months	Labour pain	38 w 1 d	37 w 2 d	0						32	3	V	5	Reg	84	114	82	92.67	88	118	78	91.33	52	26	N	NAD	380	N	N	N	N	N	NAD	N	F	2.7	Y	N	A	12.3
25	23	B	housewife	8th	low	9 months	Labour pain	42 w 1 d	39 w 5 d	0						33	3	V	3	Reg	76	124	68	86.67	82	128	70	89.33	22	10	Y	192	550	N	N	Y	Y	Y	E	V	M	3	Y	N	B	10.5
26	30	B	housewife	9th	low	9 months	Labour pain	38 w 6 d	38 w 1 d	1	FT	VD	L	N	N	33	3	V	2	Reg	76	118	70	86.00	82	122	72	88.67	30	6	N	NAD	420	N	N	N	N	N	PT	N	M	2.8	Y	N	O	12.4
27	27	B	Labourer	9th	low	9 months	Labour pain	40 w 3 d	40 w 1 d	1	FT	VD	L	N	N	34	3	V	1	Reg	80	120	76	90.67	86	126	78	94.00	21	28	N	NAD	510	Y	Y	Y	Y	Y	E	F	F	3.3	N	TTN	A	11.7
28	27	B	housewife	9th	low	9 months	Labour pain	39 w 4 d	38 w 4 d	2	FT	VD	L	N	Y	32	3	V	2	Reg	78	122	80	94.00	110	128	82	97.33	8	17	N	NAD	280	N	N	N	N	N	NAD	N	M	2.8	Y	N	B	11.8
29	25	U	housewife	8th	low	9 months	leaking PV	39 w 2 d		3	FT	2 VD 1 CS	L	N	N	33	3	V	2	Reg	78	126	82	96.67	78	122	84	96.67	6	3	N	NAD	270	N	N	N	N	N	N	N	M	3.3	Y	N	O	11.6
30	28	B	housewife	9th	low	9 months	Labour pain	38 w 1 d	37 w 3 d	1	FT	VD	L	N	N	32	3	V	1	Reg	80	110	74	86.00	86	116	78	90.67	25	24	N	NAD	270	N	N	N	N	N	NAD	N	M	2.7	Y	N	B	10.2
31	21	B	housewife	8th	low	9 months	Labour pain	36 w 4 d	36 w 1 d	2	FT	VD	L	N	N	32	3	V	4	Reg	84	114	70	84.67	90	118	70	86.00	10	22	N	NAD	410	N	N	N	N	N	NAD	N	F	2.9	Y	N	O	10.6
32	22	B	housewife	9th	low	9 months	Labour pain	33 w 5 d	32 w 4 d	1	FT	VD	L	N	N	30	3	V	3	Reg	86	118	76	90.00	94	120	78	92.00	15	5	Y	116	280	N	N	N	N	N	PT	N	M	2.7	Y	N	B	9.8
33	24	B	labourer	3rd	low	9 months	Labour pain	36 w 4 d	36 w 4 d	0						32	3	V	3	Reg	80	110	80	90.00	108	112	72	85.33	36	4	N	NAD	430	N	N	N	N	N	NAD	N	F	2.8	Y	N	B neg	12.4
34	21	B	housewife	8th	low	9 months	Labour pain	38 w 3 d	37 w 5 d	1	FT	VD	L	N	N	33	3	V	2	Reg	74	98	60	72.67	88	100	64	76.00	18	3	Y	132	280	N	N	N	N	N	NAD	N	F	2.9	Y	N	B	10.7
35	22	B	labourer	5th	low	9 months	Labour pain	39 w 3 d	37 w 1 d	0						33	3	V	3	Reg	76	104	74	84.00	112	104	78	86.67	44	13	N	NAD	280	N	N	N	N	N	NAD	N	F	2.7	Y	N	B	11.2
36	36	B	housewife	9th	low	9 months	Labour pain	36 w 3 d	36 w 2 d	2	FT	VD	L	N	N	32	3	V	3	Reg	84	126	70	88.67	88	128	72	90.67	12	7	N	NAD	300	N	N	N	N	N	NAD	N	M	2.8	Y	N	A	11.3
37	28	B	housewife	10th	low	9 months	Labour pain	38 w 5 d	38 w 5 d	2	FT	VD	L	N	N	33	3	V	2	Reg	80	106	66	79.33	92	110	70	83.33	17	3	N	NAD	320	N	N	N	N	N	NAD	N	M	3	Y	N	B	12.1
38	22	B	labourer	6th	low	9 months	Labour pain	40 w 2 d	39 w 3 d	1	FT	VD	L	N	N	34	3	V	4	Reg	82	122	72	88.67	105	120	70	86.67	24	9	N	NAD	300	N	N	N	N	N	NAD	N	M	2.6	Y	N	A	12.3
39	28	B	housewife	9th	low	9 months	leaking PV	37 w 3 d	36 w 3 d	3	FT	VD	2 L 1 D	N	N	32	3	V	4	Reg	76	124	70	88.00	86	120	70	86.67	10	5	N	NAD	380	N	N	N	N	N	N	N	M	2.6	Y	N	A	12.3
40	22	U	labourer	4th	low	8 months	Labour pain	35 w 5 d		1	PT	VD	L	N	N	30	3	V	2	Reg	90	108	64	78.67	96	110	66	80.67	14	5	Y	210	410	N	N	N	N	N	NAD	N	M	2.4	Y	N	B	11.5
41	31	U	housewife	9th	low	9 months	Labour pain	39 w 4 d		0						33	3	V	5	Reg	80	114	68	83.33	86	112	70	84.00	32	11	N	NAD	370	N	N	N	N	N	NAD	N	M	2.9	Y	N	O	10.3
42	23	B	housewife	9th	low	9 months	Labour pain	36 w 6 d	36 w 2 d	1	FT	VD	L	N	N	32	3	V	5	Reg	90	110	66	80.67	98	114	70	84.67	16	16	N	NAD	520	N	N	Y	N	Y	PT	N	M	3.2	Y	N	O	10.5
43	21	B	Labourer	9th	low	9 months	Labour pain	40 w 2 d	38 w 2 d	0						34	3	V	4	Reg	82	104	60	74.67	94	106	62	76.67	48	28	N	NAD	410	N	N	N	N	N	NAD	V	F	3	N	BA	B	8.6
44	26	B	housewife	9th	low	9 months	Labour pain	36 w 2 d	35 w 6 d	1	FT	VD	L	N	N	32	3	V	5	Reg	78	100	70	80.00	93	104	66	78.67	26	18	N	NAD	350	N	N	N	N	N	NAD	N	F	2.8	Y	N	O	12.9
45	30	B	housewife	10th	low	9 months	Labour pain	39 w 1 d	38 w 4 d	2	FT	VD	L	N	N	33	3	V	4	Reg	74	118	70	86.00	88	122	72	88.67	14	5	N	NAD	270	N	N	N	N	N	NAD	N	F	2.9	Y	N	B	10.7
46	35	B	Labourer	6th	low	9 months	Labour pain	37 w 4 d	37 w 1 d	2	FT	VD	L	N	N	33	3	V	3	Reg	72	124	72	89.33	82	126	72	90.00	19	8	N	NAD	350	N	N	N	N	N	NAD	N	F	2.7	Y	N	O	11.8
47	28	B	housewife	9th	low	9 months	leaking PV	38 w 1 d	37 w 3 d	1	FT	VD	L	N	N	33	3	V	3	Reg	66	100	68	78.67	84	106	70	82.00	21	22	N	NAD	430	N	N	N	N	N	NAD	N	F	2.8	Y	N	B	11.6
48	34	B	housewife	10th	low	9 months	Labour pain	39 w 6 d	38 w 5 d	3	FT	VD	L	N	N	33	3	V	2	Reg	84	118	70	86.00	92	120	72	88.00	12	8	N	NAD	410	N	N	N	N	N	N	N	F	3.2	Y	N	A	8.4
49	25	B	Labourer	8th	low	8 months	Labour pain	35 w 4 d	35 w 4 d	1	FT	VD	L	N	N	31	3	V	3	Reg	74	122	84	96.67	88	126	86	99.33	20	12	N	NAD	300	N	N	N	N	N	NAD	N	F	3	Y	N	O	10.3
50	29	B	housewife	9th	low	9 months	Labour pain	39 w 4 d	39 w 1 d	0						33	3	V	2	Reg	84	114	68	83.33	94	118	70	86.00	37	26	N	NAD	280	N	N	N	N	N	NAD	N	M	2.8	Y	N	B	9.4

Group B

Sr. No.	Age	B/UB	Occupation	Edu	Socio-Eco	Duration	Complain	Gest Age		Obstetric History						Per Abdomen					Pre Delivery				Post Delivery				2nd Stage (min)	3rd Stage (min)	Time oxy to pl	Augmentation	Aug time (min)	PPBL (ml)	Retained Pl (Y/N)	Manual Removal (Y/N)	PPH (Y/N)	Add Uterotonic	BT	Epi/PT	Instrumentation	Sex	Wt	CIAB	Fetal compli	BG	Hb
								LMP	USG	No. of children	FT/PT	Mode	Baby L/D	Complication	H/O PPH	Fun Ht	Contraction	Presentation	Head (fifth)	FHS	P	BP sys	BP dias	Mean BP	P	BP sys	BP dias	Mean BP																			
1	30	B	housewife	7th	low	9 months	Labour pain	36 w 3 d	36 w 2 d	2	FT	VD	L	N	N	32	3	V	3	Reg	78	120	72	88.00	84	114	70	84.67	23	5	6	N	N	330	N	N	N	N	N	NAD	N	F	2.9	Y	N	B	10.4
2	31	B	worker	10th	low	9 months	Labour pain	35 w 4 d	35 w 1 d	1	FT	VD	L	N	N	32	3	V	3	Reg	72	116	78	90.67	80	120	76	90.67	22	4	4	N	N	260	N	N	N	N	N	NAD	N	F	2.5	Y	N	O	11.2
3	35	B	housewife	10th	low	9 months	Labour pain	37 w 4 d	36 w 5 d	3	FT	VD	L	N	N	33	3	V	2	Reg	84	124	68	86.67	86	126	64	84.67	23	4	5	N	N	330	N	N	N	N	N	NAD	N	F	3	Y	N	O	10.5
4	31	B	labourer	6th	low	9 months	Labour pain	38 w 2 d	38 w 4 d	2	FT	VD	L	N	N	34	3	V	3	Reg	90	114	66	82.00	92	112	60	77.33	29	3	5	N	N	320	N	N	N	N	N	NAD	N	F	2.8	Y	N	O	9.8
5	30	B	housewife	8th	low	9 months	leaking PV	39 w 6 d	40 w 2 d	2	FT	VD	L	N	N	32	3	V	3	Reg	84	100	62	74.67	86	102	62	75.33	15	6	7	N	N	300	N	N	N	N	N	NAD	N	M	3.1	Y	N	A	11.2
6	32	B	housewife	9th	low	9 months	Labour pain	39 w 2 d	39 w 3 d	2	FT	VD, CS	L	N	N	33	3	V	3	Reg	74	100	68	78.67	76	100	66	77.33	17	3	4	N	N	290	N	N	N	N	N	NAD	N	F	3.3	Y	N	A	10.4
7	25	B	housewife	10th	low	9 months	Labour pain	38 w 3 d	38 w 1 d	1	FT	VD	L	N	N	33	3	V	4	Reg	86	128	74	92.00	78	120	72	88.00	15	6	7	N	N	250	N	N	N	N	N	NAD	N	F	2.9	Y	N	B	10.6
8	23	B	housewife	9th	low	9 months	Labour pain	39 w 1 d	39 w 1 d	0						33	3	V	5	Reg	68	114	80	91.33	70	112	76	88.00	35	11	12	N	N	350	N	N	N	N	N	E	V	M	3.2	Y	N	O	11.4
9	24	B	housewife	10th	low	9 months	Labour pain	36 w 4 d	36 w 2 d	1	FT	VD	L	N	N	32	3	V	4	Reg	66	118	74	88.67	72	116	76	89.33	26	5	6	N	N	210	N	N	N	N	N	NAD	N	F	3.2	Y	N	B	11.3
10	22	U	housewife	11th	low	9 months	Labour pain	38 w 5 d		0						32	3	V	3	Reg	86	104	70	81.33	74	102	68	79.33	26	9	9	N	N	280	N	N	N	N	N	NAD	N	M	2.6	Y	N	A	12.3
11	23	B	housewife	10th	low	9 months	leaking PV	38 w 1 d	37 w 6 d	1	FT	VD	L	N	N	33	3	V	2	Reg	70	116	74	88.00	76	118	72	87.33	28	5	6	N	N	300	N	N	N	N	N	NAD	N	M	2.8	Y	N	A	10.4
12	22	B	labourer	10th	low	9 months	Labour pain	39 w 4 d	39 w 1 d	1	FT	VD	L	N	N	34	3	V	1	Reg	80	116	78	90.67	82	112	76	88.00	15	7	7	N	N	270	N	N	N	N	N	NAD	N	F	2.6	Y	N	B	9.6
13	28	B	housewife	9th	low	9 months	Labour pain	37 w 4 d	37 w 2 d	2	FT	VD	L	N	N	32	3	V	1	Reg	82	108	64	78.67	80	102	62	75.33	15	5	6	N	N	320	N	N	N	N	N	NAD	N	M	2.9	Y	N	O	11.2
14	20	B	housewife	10th	low	9 months	Labour pain	38 w 5 d	38 w 3 d	0						33	3	V	2	Reg	84	104	62	76.00	84	100	62	74.67	30	11	12	N	N	290	N	N	N	N	N	PT	N	M	3	Y	N	A	11.1
15	22	B	labourer	9th	low	9 months	Labour pain	39 w 2 d	38 w 5 d	2	FT, PT	VD	L	N	N	34	3	V	5	Reg	86	116	78	90.67	78	110	76	87.33	14	4	5	N	N	250	N	N	N	N	N	NAD	N	M	3	Y	N	O	8.9
16	24	B	housewife	10th	low	9 months	Labour pain	38 w 1 d	37 w 3 d	2	FT	VD	L	N	N	33	3	V	3	Reg	84	122	80	94.00	88	120	80	93.33	12	5	5	N	N	280	N	N	N	N	N	NAD	N	F	2.8	Y	N	A	9.2
17	23	B	housewife	10th	low	9 months	Labour pain	39 w 5 d	38 w 4 d	1	FT	VD	L	N	N	33	3	V	4	Reg	82	128	82	97.33	82	120	80	93.33	25	4	5	N	N	410	N	N	N	N	N	NAD	N	M	3.2	Y	N	B	10.5
18	24	U	labourer	10th	low	9 months	Labour pain	41 w 2 d		1	FT	VD	L	N	N	33	3	V	4	Reg	86	130	78	95.33	84	122	76	91.33	30	2	3	N	N	320	N	N	N	N	N	PT	V	F	2.8	N	TTN	O	7.8
19	24	B	housewife	12th	low	9 months	Labour pain	41 w 4 d	40 w 3 d	0						34	3	V	4	Reg	88	110	66	80.67	88	116	64	81.33	18	5	6	Y	160	310	N	N	N	N	N	E	V	F	3.2	N	BA	B	8.6
20	27	B	housewife	10th	low	9 months	leaking PV	37 w 5 d	37 w 4 d	2	FT	VD, CS	1 L, 1 D	N	N	32	3	V	3	Reg	86	114	72	86.00	84	102	70	80.67	17	6	6	N	N	250	N	N	N	N	N	NAD	N	F	3.1	Y	N	B	10.3
21	36	B	housewife	12th	low	9 months	Labour pain	39 w 1 d	38 w 5 d	1	FT	VD	L	N	N	33	3	V	2	Reg	82	106	70	82.00	94	112	66	81.33	14	3	4	Y	130	230	N	N	N	N	N	NAD	N	F	2.6	Y	N	A	9.8
22	30	B	housewife	12th	low	9 months	Labour pain	38 w 4 d	38 w 3 d	2	FT	VD	L	N	N	33	3	V	2	Reg	78	108	66	80.00	82	114	64	80.67	16	3	4	N	N	230	N	N	N	N	N	NAD	N	M	2.8	Y	N	A	11.6
23	32	B	housewife	10th	low	9 months	Labour pain	37 w 6 d	37 w 4 d	3	FT	VD	L	N	N	33	3	V	1	Reg	68	110	72	84.67	72	102	62	75.33	15	3	5	N	N	310	N	N	N	N	N	NAD	N	F	2.8	Y	N	B	9.4
24	34	B	housewife	10th	low	9 months	Labour pain	38 w	37 w 5 d	3	FT	VD	L	N	N	33	3	V	5	Reg	84	112	74	86.67	70	104	68	80.00	10	1	3	N	N	300	N	N	N	N	N	NAD	N	M	2.8	Y	N	B	8.9
25	26	B	housewife	11th	low	9 months	Labour pain	36 w 6 d	36 w 3 d	2	FT	VD	L	N	N	33	3	V	2	Reg	86	110	60	76.67	92	106	60	75.33	18	2	2	N	N	270	N	N	N	N	N	PT	N	F	2.8	Y	N	B	10.3
26	20	B	housewife	8th	low	9 months	Labour pain	40 w 4 d	40 w 3 d	0						32	3	V	2	Reg	90	106	64	78.00	104	100	62	74.67	38	3	4	N	N	350	N	N	N	N	N	NAD	N	M	2.9	Y	N	B	8.8
27	30	B	labourer	6th	low	9 months	Labour pain	36 w 5 d	36 w 4 d	1	FT	VD	L	N	N	33	3	V	1	Reg	86	116	76	89.33	72	112	72	85.33	18	4	5	N	N	250	N	N	N	N	N	NAD	N	M	3.3	Y	N	AB	8.4
28	27	B	housewife	11th	low	9 months	Labour pain	40 w 2 d	39 w 5 d	0						32	3	V	2	Reg	76	124	60	81.33	74	128	80	96.00	42	8	10	N	N	340	N	N	N	N	N	E	N	F	2.8	Y	N	O	10.4
29	30	B	housewife	10th	low	9 months	Labour pain	37 w 6 d	37 w 1 d	1	FT	VD	L	N	N	33	3	V	2	Reg	82	104	70	81.33	86	106	68	80.67	26	9	10	N	N	300	N	N	N	N	N	NAD	N	M	2.9	Y	N	B	11.2
30	22	B	worker	12th	low	9 months	Labour pain	38 w 2 d	38 w 1 d	1	FT	VD	L	N	N	32	3	V	1	Reg	78	122	76	91.33	78	120	76	90.67	24	6	7	N	N	270	N	N	N	N	N	NAD	N	M	3	Y	N	B	9.1
31	29	B	housewife	10th	low	8 months	leaking PV	34 w 5 d	33 w 4 d	2	FT	VD	L	N	N	31	3	V	4	Reg	76	120	72	88.00	76	114	80	91.33	12	8	9	N	N	310	N	N	N	N	N	NAD	N	F	2.6	Y	N	B	10.9
32	24	B	housewife	10th	low	9 months	Labour pain	39 w 1 d	39 w	0						32	3	V	4	Reg	70	110	66	80.67	72	116	76	89.33	28	9	10	Y	190	300	N	N	N	N	N	NAD	N	F	3	Y	N	O	9.5
33	25	B	housewife	9th	low	9 months	Labour pain	38 w 4 d	38 w 2 d	1	FT	VD	L	N	N	33	3	V	3	Reg	80	112	70	84.00	86	114	64	80.67	35	16	17	N	N	260	Y	Y	N	Y	N	NAD	N	F	3.1	Y	N	AB	8.5
34	20	B	housewife	10th	low	9 months	Labour pain	41 w 3 d	40 w 4 d	0						34	3	V	2	Reg	74	114	74	87.33	76	122	72	88.67	32	5	5	N	N	290	N	N	N	N	N	NAD	N	F	2.7	Y	N	O	11.7
35	30	B	housewife	12th	low	8 months	Labour pain	35 w 4 d	35 w 1 d	2	FT	VD	L	N	N	31	3	V	3	Reg	82	126	70	88.67	84	124	72	89.33	18	7	7	N	N	270	N	N	N	N	N	NAD	N	F	2.4	Y	N	O	9.3
36	31	B	labourer	10th	low	9 months	Labour pain	38 w 3 d	38 w 2 d	2	FT	VD	L	N	N	33	3	V	4	Reg	78	124	82	96.00	78	120	80	93.33	22	4	5	N	N	300	N	N	N	N	N	NAD	N	M	2.7	Y	N	O	9.8
37	23	B	housewife	8th	low	9 months	Labour pain	39 w 2 d	38 w 5 d	1	FT	VD	L	N	N	33	3	V	2	Reg	84	112	68	82.67	90	114	66	82.00	22	2	3	N	N	260	N	N	N	N	N	NAD	N	M	2.7	Y	N	A neg	9.9
38	23	B	housewife	10th	low	9 months	Labour pain	38 w 5 d	38 w 1 d	0						32	3	V	4	Reg	86	106	70	82.00	88	100	72	81.33	45	8	8	N	N	340	N	N	N	N	N	E	N	F	3.1	Y	N	B	12
39	24	U	housewife	7th	low	9 months	Labour pain	37 w 3 d		1	FT	VD	L	N	N	32	3	V	4	Reg	80	110	68	82.00	86	106	68	80.67	19	4	4	N	N	380	N	N	N	N	N	NAD	N	M	2.5	Y	N	O	9.6
40	34	B	housewife	10th	low	9 months	Labour pain	39 w 2 d	37 w 6 d	3	FT	VD	L	N	N	33	3	V	2	Reg	78	114	66	82.00	84	110	64	79.33	11	3	3	N	N	280	N	N	N	N	N	NAD	N	F	2.9	Y	N	A	9.3
41	24	B	housewife	10th	low	9 months	Labour pain	36 w 6 d	34 w 6 d	1	FT	VD	L	N	N	32	3	V	5	Reg	74	122	80	94.00	76	116	76	89.33	18	4	4	N	N	270	N	N	N	N	N	NAD	N	F	2.9	Y	N	B	10.4
42	19	B	housewife	10th	low	9 months	Labour pain	37 w 2 d	36 w 1 d	2	FT	VD	L	N	N	33	3	V	5	Reg	82	104	76	85.33	84	102	78	86.00	13	4	5	N	N	280	N	N	N	N	N	NAD	N	M	3	Y	N	B	10.4
43	21	B	housewife	11th	low	9 months	Labour pain	38 w 6 d	38 w	0						34	3	V	4	Reg	92	114	70	84.67	96	110	68	82.00	40	11	11	N	N	280	N	N	N	N	N	NAD	N	M	2.5	Y	N	A	10.2
44	20	B	housewife	8th	low	9 months	Labour pain	37 w 1 d	36 w 2 d	1	FT	VD	L	N	N	32	3	V	1	Reg	82	112	66	81.33	86	112	64	80.00	26	3	4	N	N	180	N	N	N	N	N	NAD	N	M	2.6	Y	N	B	11.5
45	21	B	housewife	6th	low	9 months	Labour pain	39 w 3 d	38 w 2 d	2	FT	VD	L	N	N	33	3	V	4	Reg	78	104	70	81.33	82	100	66	77.33	18	5	5	N	N	300	N	N	N	N	N	NAD	N	F	2.6	Y	N	O	11.2
46	22	B	housewife	11th	low	9 months	Labour pain	40 w 1 d	39 w 1 d	0						33	3	V	3	Reg	84	116	72	86.67	86	108	76	86.67	32	11	12	Y	50	300	N	N	N	N	N	E	N	F	2.9	Y	N	B neg	9.9
47	27	B	housewife	10th	low	9 months	Labour pain	36 w 2 d	36 w 6 d	2	FT	VD	L	N	N	32	3	V	3	Reg	82	108	68	81.33	88	100	62	74.67	15	3	4	N	N	280	N	N	N	N	N	NAD	N	M	3.1	Y	N	O	10.1
48	21	B	housewife	2nd	low	9 months	Labour pain	38 w 3 d	37 w 2 d	1	FT	VD	L	N	N	32	3	V	1	Reg	78	112	70	84.00	86	110	64	79.33	21	2	3	N	N	250	N	N	N	N	N	NAD	N	F	2.9	Y	N	O	10.3
49	20	B	housewife	5th	low	9 months	Labour pain	36 w 1 d	35 w 6 d	0						32	3	V	3	Reg	76	118	72	87.33	84	120	82	94.67	16	3	3	N	N	310	N	N	N	N	N	NAD	N	M	2.7	Y	N	B	9.8
50	26	B	housewife	10th	low	9 months	Labour pain	39 w 5 d	39 w 1 d	1	FT	VD	L	N	N	32	3	V	2	Reg	74	122	68	86.00	82	116	66	82.67	30	2	3	N	N	270	N	N	N	N	N	NAD	N	F	3.1	Y	N	A	11.8

Group C

Sr. No.	Age	B/UB	Occupation	Edu	Socio-Eco	Duration	Complain	Gest Age		Obstetric History						Per Abdomen					Pre Delivery				Post Delivery				2nd Stage (min)	3rd Stage (min)	Time oxy to pl	Augmentation	Aug time (min)	PPBL (ml)	Retained PI (Y/N)	Manual Removal (Y/N)	PPH (Y/N)	Add Uterotonic	BT	Epi/PT	Instrumentation	Sex	Wt	CIAB	Fetal compli	BG	Hb
								LMP	USG	No. of children	FT/PT	Mode	Baby L/D	Complication	H/O PPH	Fun Ht	Contraction	Presentation	Head (fifth)	FHS	P	BP sys	BP dias	Mean BP	P	BP sys	BP dias	Mean BP																			
1	22	B	housewife	6th	low	9 months	labour pain	36 w 4 d	36 w 1 d	1	FT	VD	L	N	N	32	3	V	1	R	84	112	72	85.33	90	104	68	80.00	14	5	5	N	NAD	280	N	N	N	N	N	NAD	N	M	2.8	Y	N	O	8.9
2	20	B	housewife	8th	low	9 months	labour pain	37 w 4 d	36 w 4 d	1	FT	VD	L	N	N	32	4	V	1	R	76	110	68	82.00	82	102	74	83.33	20	3	3	N	NAD	240	N	N	N	N	N	NAD	N	F	2.9	Y	N	B	9.6
3	24	B	labourer	3rd	low	9 months	labour pain	39 w 1 d	38 w 3 d	2	FT	VD	L	N	N	33	3	V	2	R	84	114	84	94.00	76	112	66	81.33	8	2	2	N	NAD	360	N	N	N	N	N	NAD	N	F	2.7	Y	N	B neg	10.3
4	20	B	housewife	5th	low	9 months	labour pain	40 w 2 d	37 w 5 d	0						34	3	V	5	R	82	112	80	90.67	92	104	68	80.00	43	6	6	Y	65	300	N	N	N	N	N	E	N	F	2.8	Y	N	O	9.5
5	25	B	housewife	10th	low	9 months	labour pain	38 w 5 d	40 w 3 d	1	FT	VD	L	N	N	33	4	V	3	R	86	102	82	88.67	92	100	70	80.00	15	5	5	N	NAD	280	N	N	N	N	N	NAD	N	M	2.5	Y	N	B	11.3
6	20	B	labourer	12th	low	9 months	labour pain	39 w 2 d	38 w 3 d	3	FT	VD	L	N	N	34	3	V	4	R	88	126	74	91.33	84	120	62	81.33	8	3	3	N	NAD	330	N	N	N	N	N	NAD	N	M	2.6	Y	N	B	10.4
7	20	B	housewife	5th	low	9 months	labour pain	38 w 6 d	39 w 6 d	1	FT	VD	L	N	N	33	4	V	4	R	72	112	68	82.67	76	112	76	88.00	10	5	5	N	NAD	260	N	N	N	N	N	NAD	N	F	3	Y	N	O	12.7
8	34	B	housewife	8th	low	9 months	labour pain	37 w 1 d	39 w 4 d	3	FT	VD	2 L 1 D	N	N	33	4	V	4	R	76	118	76	90.00	80	106	82	90.00	6	4	4	N	NAD	380	N	N	N	N	N	NAD	N	M	2.9	Y	N	B	11.2
9	20	B	housewife	8th	low	9 months	labour pain	36 w 5 d	38 w 4 d	2	FT	VD	L	N	N	32	3	V	3	R	74	124	82	96.00	74	108	66	80.00	12	3	3	N	NAD	320	N	N	N	N	N	NAD	N	F	3.1	Y	N	A	11.4
10	19	B	labourer	7th	low	8 months	labour pain	35 w 3 d	38 w 1 d	2	FT	VD	L	N	N	33	4	V	2	R	68	110	88	95.33	72	112	80	90.67	24	3	3	N	NAD	280	N	N	N	N	N	NAD	N	M	2.8	Y	N	B	12.1
11	19	B	housewife	2nd	low	9 months	leaking	39 w 1 d	37 w 2 d	1	FT	VD	L	N	N	32	3	V	2	R	62	104	70	81.33	70	100	84	89.33	18	8	8	N	NAD	310	N	N	N	N	N	NAD	N	F	2.6	Y	N	B	9.8
12	20	B	housewife	9th	low	9 months	labour pain	39 w 3 d	38 w 5 d	1	FT	CS	L	N	N	33	3	V	1	R	86	116	68	84.00	84	102	78	86.00	22	12	12	N	NAD	380	N	N	N	N	N	E	V	F	3.3	Y	N	O	13.5
13	20	B	housewife	10th	low	9 months	labour pain	36 w 6 d	36 w 3 d	0						31	4	V	2	R	74	120	62	81.33	74	110	76	87.33	38	12	12	N	NAD	270	N	N	N	N	N	E	V	F	2.9	Y	N	B	10.8
14	25	B	labourer	9th	low	9 months	labour pain	37 w 3 d	39 w 2 d	2	FT	VD	L	N	N	32	2	V	1	R	76	122	74	90.00	74	108	78	88.00	10	4	4	N	NAD	240	N	N	N	N	N	NAD	N	F	2.7	Y	N	O	11.3
15	24	B	labourer	8th	low	9 months	labour pain	37 w 5 d	39 w 5 d	1	FT	VD	L	N	N	33	4	V	2	R	81	104	66	78.67	76	100	80	86.67	14	6	6	N	NAD	300	N	N	N	N	N	NAD	N	F	2.9	Y	N	O	11.2
16	21	B	housewife	7th	low	9 months	labour pain	39 w 6 d	37 w 2 d	3	FT	VD	L	PIH	PPH	32	3	V	3	R	64	116	78	90.67	68	108	72	84.00	10	2	2	N	NAD	350	N	N	N	N	N	NAD	N	F	2.6	Y	N	A	10.3
17	26	B	housewife	5th	low	9 months	labour pain	40 w 3 d	36 w 1 d	1	FT	VD	L	N	N	33	4	V	2	R	76	104	84	90.67	84	112	68	82.67	8	3	3	Y	55	250	N	N	N	N	N	NAD	N	M	2.7	Y	N	O	10.6
18	28	B	housewife	9th	low	9 months	labour pain	38 w	39 w 4 d	0						31	2	V	4	R	83	140	80	100.00	72	132	80	97.33	28	4	4	Y	116	310	N	N	N	N	N	PT	N	M	2.6	Y	N	B	10.3
19	22	U	housewife	8th	low	9 months	labour pain	39 w 6 d		2	FT	VD	L	N	N	31	4	V	3	R	75	136	82	100.00	78	130	74	92.67	13	8	8	N	NAD	320	N	N	N	N	N	NAD	N	F	3	Y	N	A	9.8
20	18	B	housewife	9th	low	9 months	labour pain	39 w 4 d	42 w 1 d	0						32	2	V	2	R	72	104	78	86.67	82	100	68	78.67	48	15	15	N	NAD	240	N	N	N	N	N	E	N	F	2.6	Y	N	A	11.4
21	25	B	housewife	9th	low	9 months	labour pain	38 w 4 d	38 w 6 d	0						33	3	V	4	R	83	104	68	80.00	90	104	72	82.67	35	3	3	Y	240	420	N	N	N	N	N	E	F	M	3.2	N	MAS	O	6.4
22	23	B	housewife	9th	low	9 months	labour pain	38 w 1 d	40 w 3 d	2	FT	VD	L	N	N	33	3	V	3	R	82	112	70	84.00	76	116	78	90.67	9	4	4	N	NAD	250	N	N	N	N	N	NAD	N	M	2.8	Y	N	B	8.6
23	20	B	housewife	9th	low	9 months	labour pain	37 w 2 d	39 w 4 d	1	FT	VD	L	N	N	31	4	V	2	R	72	106	82	90.00	74	118	82	94.00	15	10	10	N	NAD	280	N	N	N	N	N	NAD	N	F	3.1	Y	N	O	11.2
24	24	U	housewife	10th	low	9 months	labour pain	37 w 5 d		3	FT	VD	L	N	N	32	2	V	3	R	86	112	74	86.67	82	126	80	95.33	4	3	3	N	NAD	400	N	N	N	N	N	NAD	N	M	3.1	Y	N	O	7.4
25	20	U	housewife	6th	low	9 months	labour pain	39 w 5 d		2	FT	VD	L	N	N	33	2	V	1	R	68	128	78	94.67	78	110	72	84.67	13	3	3	N	NAD	400	N	N	N	N	N	PT	N	M	3.3	Y	N	B	11
26	24	B	teacher	12th	low	9 months	labour pain	38 w 3 d	40 w 3 d	2	FT	VD	L	N	N	33	2	V	1	R	82	108	68	81.33	82	104	76	85.33	12	7	7	N	NAD	270	N	N	N	N	N	NAD	N	F	2.7	Y	N	B	12.5
27	28	B	housewife	8th	low	9 months	labour pain	39 w 1 d	37 w 4 d	1	FT	VD	L	N	N	32	4	V	2	R	76	116	74	88.00	78	118	74	88.67	24	8	8	N	NAD	310	N	N	N	N	N	NAD	N	M	2.5	Y	N	B	10.6
28	22	B	housewife	9th	low	9 months	labour pain	39 w	38 w 5 d	3	FT	VD	L	N	PIH	32	3	V	1	R	90	128	80	96.00	74	106	74	84.67	6	3	3	N	NAD	270	N	N	N	N	N	NAD	N	M	2.7	Y	N	B	9.4
29	21	B	housewife	9th	low	9 months	labour pain	40 w 4 d	38 w 3 d	1	FT	CS	L	N	N	32	2	V	4	R	80	120	74	89.33	80	112	72	85.33	28	5	5	N	NAD	410	N	N	N	N	N	PT	N	M	3.2	Y	N	B	10.2
30	30	B	housewife	10th	low	9 months	labour pain	41 w 5 d	37 w 4 d	1	FT	VD	L	N	N	32	3	V	3	R	90	112	86	94.67	82	108	80	89.33	26	8	8	N	NAD	320	N	N	N	N	N	NAD	N	F	2.9	Y	N	A	11.5
31	24	B	housewife	9th	low	9 months	leaking	37 w 5 d	37 w 5 d	2	FT	VD	L	N	N	33	4	V	5	R	82	106	72	83.33	78	110	74	86.00	10	4	4	N	NAD	280	N	N	N	N	N	NAD	N	M	2.9	Y	N	A	11.9
32	22	B	housewife	12th	low	9 months	labour pain	36 w 4 d	36 w 3 d	2	FT	VD	L	N	N	33	4	V	3	R	78	122	66	84.67	76	114	66	82.00	8	5	5	N	NAD	300	N	N	N	N	N	NAD	N	F	2.5	Y	N	O	10.2
33	21	B	housewife	10th	low	9 months	labour pain	39 w 2 d	39 w 2 d	1	FT	VD	L	N	N	32	4	V	2	R	74	126	80	95.33	82	116	62	80.00	21	4	4	N	NAD	220	N	N	N	N	N	NAD	N	M	2.6	Y	N	B	9.8
34	22	B	housewife	12th	low	9 months	labour pain	38 w 4 d	38 w 5 d	2	FT	VD	L	N	N	33	2	V	4	R	80	108	84	92.00	80	120	84	96.00	15	6	6	N	NAD	260	N	N	N	N	N	NAD	N	M	2.8	Y	N	O	12.1
35	22	B	housewife	12th	low	9 months	labour pain	37 w 4 d	37 w 3 d	3	FT	VD	L	N	N	32	3	V	4	R	84	106	78	87.33	68	100	60	73.33	9	5	5	N	NAD	310	N	N	N	N	N	NAD	N	F	3	Y	N	O	9.4
36	19	B	labourer	10th	low	9 months	labour pain	38 w 5 d	39 w 2 d	2	FT	VD	L	N	N	33	2	V	3	R	76	112	70	84.00	74	124	74	90.67	12	3	3	N	NAD	280	N	N	N	N	N	NAD	N	M	2.6	Y	N	A	11.8
37	23	B	labourer	10th	low	9 months	labour pain	36 w 3 d	36 w 6 d	1	FT	VD	L	N	N	32	3	V	4	R	82	122	76	91.33	82	112	80	90.67	16	2	2	N	NAD	260	N	N	N	N	N	NAD	N	M	2.8	Y	N	AB	8.7
38	20	B	housewife	11th	low	9 months	labour pain	39 w 2 d	37 w 2 d	0						31	3	V	2	R	84	128	74	92.00	80	110	78	88.67	32	6	6	N	NAD	320	N	N	N	N	N	NAD	V	F	2.8	Y	N	O	10.6
39	23	B	labourer	8th	low	9 months	labour pain	39 w 5 d	38 w 6 d	1	FT	VD	L	N	N	31	3	V	1	R	86	112	86	94.67	84	110	72	84.67	12	9	9	Y	100	220	N	N	N	N	N	NAD	N	F	2.8	Y	N	B	10.6
40	28	U	housewife	6th	low	9 months	labour pain	37 w 2 d		2	FT	VD	L	N	N	32	2	V	2	R	73	108	82	90.67	78	104	68	80.00	4	4	4	N	NAD	280	N	N	N	N	N	NAD	N	F	2.7	Y	N	O	11.3
41	21	B	housewife	11th	low	9 months	labour pain	36 w 1 d	38 w 6 d	2	FT	VD	L	N	N	33	4	V	3	R	68	114	74	87.33	82	98	64	75.33	6	2	2	N	NAD	300	N	N	N	N	N	NAD	N	M	2.9	Y	N	O	10.2
42	24	B	housewife	10th	low	9 months	labour pain	39 w 4 d	39 w 4 d	2	FT	VD	L	N	N	33	2	V	2	R	91	106	78	87.33	84	128	80	96.00	2	5	5	N	NAD	320	N	N	N	N	N	NAD	N	F	2.9	Y	N	B	10.9
43	30	B	housewife	12th	low	9 months	labour pain	37 w 3 d	37 w 4 d	2	FT	VD	L	N	N	33	2	V	1	R	73	112	82	92.00	76	116	74	88.00	9	6	6	N	NAD	360	N	N	N	N	N	E	V	M	2.8	Y	N	O	12.3
44	28	B	housewife	10th	low	9 months	labour pain	36 w 4 d	36 w 4 d	1	FT	VD	L	N	N	32	4	V	1	R	84	104	84	90.67	84	132	68	89.33	6	3	3	N	NAD	300	N	N	N	N	N	NAD	N	M	2.9	Y	N	B	12
45	28	B	housewife	10th	low	9 months	leaking	39 w 4 d	37 w	3	FT	VD	L	N	N	32	2	V	2	R	78	112	76	88.00	76	124	74	90.67	10	8	8	N	NAD	380	N	N	N	N	N	NAD	N	F	2.8	Y	N	O	10.3
46	23	B	labourer	3rd	low	9 months	labour pain	37 w 3 d	36 w 1 d	0						31	3	V	4	R	82	108	68	81.33	92	128	76	93.33	46	7	7	N	NAD	350	N	N	N	N	N	E	N	M	2.9	Y	N	A	12.2
47	22	B	housewife	8th	low	9 months	labour pain	38 w 1 d	37 w 3 d	2	FT	VD	L	N	N	32	4	V	2	R	80	110	66	80.67	82	114	84	94.00	8	2	2	N	NAD	320	N	N	N	N	N	NAD	N	M	3.1	Y	N	B	11.4
48	22	B	housewife	7th	low	9 months	labour pain	38 w 4 d	36 w 5 d	1	PT	VD	L	N	N	33	3	V	3	R	68	104	72	82.67	68	112	78	89.33	24	5	5	N	NAD	240	N	N	N	N	N	NAD	N	F	3	Y	N	AB	10.3
49	23	B	housewife	8th	low	9 months	labour pain	37 w 2 d	38 w 1 d	1	FT	VD	L	N	N	32	2	V	5	R	77	118	68	84.67	64	116	80	92.00	27	8	8	N	NAD	270	N	N	N	N	N	NAD	N	M	2.6	Y	N	O	11.2
50	25	B	housewife	10th	low	9 months	labour pain	41 w 3 d	39 w 1 d	2	FT	VD	L	N	N	33	3	V	2	R	83	100	70	80.00	78	108	76	86.67	10	7	7	N	NAD	200	N	N	N	N	N	NAD	N	F	2.7	Y	N	B	10

Group D

Sr. No.	Age	B/UB	Occupation	Edu	Socio-Eco	Duration	Complain	Gest Age		Obstetric History						Per Abdomen					Pre Delivery				Post Delivery				2nd Stage (min)	3rd Stage (min)	Time oxy to pl	Augmentation	Aug time (min)	PPBL (ml)	Retained Pl (Y/N)	Manual Removal (Y/N)	PPH (Y/N)	Add Uterotonic	BT	Epi/PT	Instrumentation	Sex	Wt	CIAB	Fetal compli	BG	Hb
								LMP	USG	No. of children	FT/PT	Mode	Baby L/D	Complication	H/O PPH	Fun Ht	Contraction	Presentation	Head (fifth)	FHS	P	BP sys	BP dias	Mean BP	P	BP sys	BP dias	Mean BP																		
1	30	B	housewife	9th	low	9 months	labour pain	38 w 2 d	37 w 4 d	1	FT	VD	L	NAD	N	33	3	V	2	Reg	90	112	80	90.67	82	116	78	90.67	20	4	2	N	NAD	320	N	N	N	N	N	E	V	M	3	N	BA	O	9.5
2	24	B	housewife	10th	low	9 months	labour pain	37 w 4 d	36 w 2 d	0						32	4	V	3	Reg	80	116	74	88.00	88	122	72	88.67	36	15	12	Y	110	370	N	N	N	N	N	E	N	F	3.2	Y	N	A	10.5
3	22	B	housewife	9th	low	9 months	labour pain	39 w 1 d	38 w 5 d	2	FT	VD	L	NAD	N	33	3	V	1	Reg	79	120	76	90.67	84	128	70	89.33	11	3	2	N	NAD	260	N	N	N	N	N	NAD	N	F	2.6	Y	N	O	12.1
4	24	B	housewife	10th	low	9 months	leaking	37 w 5 d	36 w 3 d	2	FT	VD	L	NAD	N	32	3	V	4	Reg	88	108	68	81.33	76	124	62	82.67	13	4	2	N	NAD	300	N	N	N	N	N	NAD	N	M	3.1	Y	N	B	11.6
5	20	B	housewife	10th	low	9 months	leaking	36 w 5 d	37 w 2 d	0						32	3	V	1	Reg	86	110	70	83.33	85	108	72	84.00	40	21	20	N	NAD	320	N	N	N	N	N	NAD	N	F	2.8	Y	N	O	9.4
6	21	B	labourer	2nd	low	9 months	labour pain	37 w 4 d	37 w 1 d	1	FT	CS	L	NAD	N	32	4	V	2	Reg	76	124	66	85.33	80	108	68	81.33	22	3	2	N	NAD	270	N	N	N	N	N	NAD	N	M	2.9	Y	N	B	10.3
7	21	B	housewife	12th	low	9 months	labour pain	38 w 5 d	37 w 1 d	1	FT	VD	L	NAD	N	33	3	V	3	Reg	82	120	72	88.00	68	112	70	84.00	15	4	3	N	NAD	260	N	N	N	N	N	NAD	N	M	2.7	Y	N	B	10.5
8	26	B	labourer	5th	low	9 months	labour pain	39 w 2 d	37 w 2 d	3	FT	VD	L	NAD	N	34	4	V	2	Reg	86	116	76	89.33	90	108	74	85.33	8	3	3	N	NAD	320	N	N	N	N	N	NAD	N	F	2.6	Y	N	B	11.3
9	24	B	housewife	12th	low	9 months	labour pain	40 w 5 d	38 w	1	FT	VD	L	PIH		33	3	V	1	Reg	78	100	64	76.00	86	102	66	78.00	28	4	2	N	NAD	300	N	N	N	N	N	PT	N	F	3.1	Y	N	O	11.4
10	20	B	housewife	12th	low	9 months	labour pain	38 w 4 d	36 w 5 d	0						34	2	V	5	Reg	90	108	60	76.00	96	100	62	74.67	32	16	12	N	NAD	310	N	N	N	N	N	PT	N	F	3.1	Y	N	O	11.2
11	32	B	labourer	4th	low	9 months	labour pain	37 w 4 d	36 w 3 d	1	FT	VD	L	NAD	N	32	3	V	3	Reg	84	110	74	86.00	100	96	72	80.00	15	5	5	Y	160	420	N	N	N	N	N	NAD	N	M	3.1	Y	N	AB	12.1
12	24	B	housewife	10th	low	9 months	labour pain	37 w 2 d	37 w 1 d	2	FT	VD	L	NAD	N	32	2	V	4	Reg	90	120	84	96.00	82	112	86	94.67	9	2	2	N	NAD	220	N	N	N	N	N	NAD	N	M	2.9	Y	N	B	9.8
13	22	B	housewife	11th	low	9 months	labour pain	38 w 1 d	36 w 5 d	0						32	3	V	2	Reg	68	104	70	81.33	70	102	70	80.67	44	20	15	Y	72	300	N	N	N	N	N	NAD	N	M	3	Y	N	A	10.2
14	19	B	housewife	8th	low	9 months	labour pain	37 w	36 w 4 d	3	FT	VD	L	NAD	N	33	3	V	2	Reg	74	108	68	81.33	80	110	76	87.33	10	2	2	N	NAD	350	N	N	N	N	N	NAD	N	F	2.9	Y	N	A	10.2
15	23	B	labourer	6th	low	9 months	leaking	38 w 5 d	37 w 5 d	2	FT	VD	L	NAD	N	32	3	V	4	Reg	86	116	80	92.00	92	106	74	84.67	8	2	1	N	NAD	210	N	N	N	N	N	NAD	N	F	3	Y	N	A	10.2
16	25	B	housewife	11th	low	9 months	labour pain	39 w 1 d	38 w 5 d	2	FT	VD	L	NAD	N	33	2	V	5	Reg	80	118	76	90.00	82	110	74	86.00	15	5	4	N	NAD	300	N	N	N	N	N	NAD	N	F	2.8	N	TTN	O	10.8
17	20	B	housewife	10th	low	9 months	labour pain	40 w 2 d	37 w 2 d	1	FT	CS	L	NAD	N	32	4	V	3	Reg	82	120	88	98.67	88	108	72	84.00	26	3	3	N	NAD	300	N	N	N	N	N	NAD	N	F	2.7	Y	N	O	9.5
18	25	U	labourer	5th	low	9 months	labour pain	36 w 6 d		0						32	3	V	2	Reg	82	104	70	81.33	90	100	72	81.33	25	22	20	N	NAD	270	N	N	N	N	N	NAD	N	F	2.6	N	MAS	B	10.6
19	20	B	housewife	10th	low	9 months	labour pain	38 w 5 d	38 w 5 d	2	FT	VD	L	NAD	N	31	4	V	1	Reg	84	108	68	81.33	78	106	66	79.33	14	3	2	N	NAD	230	N	N	N	N	N	NAD	N	F	2.7	Y	N	AB	11.4
20	26	B	housewife	10th	low	9 months	labour pain	38 w 3 d	38 w 3 d	0						32	4	V	2	Reg	92	114	78	90.00	88	110	78	88.67	52	12	10	Y	50	280	N	N	N	N	N	NAD	N	M	2.7	Y	N	B	10.1
21	25	B	housewife	9th	low	9 months	labour pain	39 w 5 d	37 w 4 d	1	PT	VD	L	NAD	N	33	2	V	3	Reg	68	126	80	95.33	78	128	76	93.33	30	4	2	N	NAD	270	N	N	N	N	N	NAD	N	F	2.7	Y	N	AB	10.3
22	21	B	housewife	10th	low	9 months	labour pain	39 w 1 d	37 w 5 d	2	FT	VD	L	NAD	N	34	3	V	4	Reg	82	114	72	86.00	82	110	74	86.00	22	1	1	N	NAD	200	N	N	N	N	N	NAD	N	M	3.2	Y	N	O	12.7
23	20	B	housewife	12th	low	9 months	labour pain	39 w 6 d	36 w 3 d	1	FT	CS	L	PIH		31	2	V	3	Reg	85	120	86	97.33	80	112	82	92.00	24	3	2	N	NAD	230	N	N	N	N	N	NAD	N	M	2.8	Y	N	A	10.5
24	22	B	housewife	10th	low	9 months	labour pain	39 w	40 w 3 d	3	FT	VD	L	NAD	N	32	3	V	2	Reg	76	104	68	80.00	87	100	66	77.33	13	4	3	N	NAD	280	N	N	N	N	N	NAD	N	M	2.8	Y	N	AB	11.9
25	20	B	labourer	8th	low	9 months	leaking	38 w 4 d	36 w 4 d	2	FT	VD	L	NAD	N	32	3	V	2	Reg	84	102	66	78.00	76	98	66	76.67	10	6	5	N	NAD	270	N	N	N	N	N	NAD	N	F	3	Y	N	O	11.3
26	25	U	housewife	10th	low	9 months	leaking	37 w 2 d		3	FT	VD	L	NAD	N	33	2	V	3	Reg	92	116	70	85.33	78	110	80	90.00	16	2	1	N	NAD	310	N	N	N	N	N	NAD	N	F	3.1	Y	N	O	10.8
27	20	B	housewife	4th	low	9 months	labour pain	39 w 5 d	36 w 3 d	3	FT	VD	L	NAD	N	34	2	V	4	Reg	80	114	72	86.00	82	112	80	90.67	10	2	1	N	NAD	600	N	N	Y	Y	Y	NAD	N	M	3	N	TTN	B	9.6
28	25	B	housewife	9th	low	9 months	labour pain	37 w 5 d	37 w 4 d	1	FT	VD	D	NAD	N	32	3	V	5	Reg	78	128	80	96.00	80	120	74	89.33	20	5	4	N	NAD	240	N	N	N	N	N	NAD	N	F	2.6	Y	N	B	11.9
29	21	B	labourer	9th	low	9 months	labour pain	36 w 3 d	36 w 3 d	3	FT	VD	L	NAD	N	31	4	V	3	Reg	82	134	82	99.33	93	126	76	92.67	21	3	3	N	NAD	350	N	N	N	N	N	E	V	M	2.7	Y	N	A	9.5
30	25	B	housewife	9th	low	9 months	labour pain	39 w 2 d	38 w 1 d	2	FT	VD	L	NAD	N	32	3	V	2	Reg	68	122	78	92.67	80	116	72	86.67	16	4	3	N	NAD	320	N	N	N	N	N	PT	N	M	3.2	Y	N	A	10.2
31	20	U	housewife	9th	low	9 months	leaking	40 w 1 d	39 w 3 d	2	FT	VD	L	NAD	N	32	2	V	3	Reg	66	106	70	82.00	70	104	70	81.33	7	5	4	N	NAD	240	N	N	N	N	N	NAD	N	M	2.7	Y	N	B	10.6
32	26	B	housewife	10th	low	9 months	labour pain	38 w 4 d	38 w 5 d	0						32	3	V	1	Reg	82	136	74	94.67	89	124	70	88.00	24	14	11	N	NAD	300	N	N	N	N	N	NAD	N	M	2.8	Y	N	O	11.7
33	23	B	labourer	6th	low	9 months	labour pain	40 w 2 d	39 w 1 d	1	FT	VD	L	NAD	N	33	2	V	3	Reg	86	112	72	85.33	95	110	74	86.00	16	4	3	Y	45	210	N	N	N	N	N	NAD	N	F	2.9	Y	N	A	12.2
34	21	B	housewife	9th	low	9 months	labour pain	37 w 3 d	39 w 4 d	1	FT	VD	L	NAD	N	34	3	V	4	Reg	78	108	60	76.00	82	106	68	80.67	18	3	3	N	NAD	240	N	N	N	N	N	NAD	N	F	2.8	Y	N	O	9.8
35	25	B	housewife	10th	low	9 months	labour pain	36 w 4 d	37 w 6 d	2	FT	VD	L	NAD	N	33	3	V	3	Reg	66	116	68	84.00	75	110	66	80.67	8	3	2	N	NAD	270	N	N	N	N	N	NAD	N	F	2.6	Y	N	B	9.9
36	24	B	housewife	8th	low	9 months	labour pain	38 w 5 d	38 w 2 d	1	FT	VD	L	NAD	N	32	3	V	2	Reg	70	104	70	81.33	112	102	70	80.67	22	5	4	N	NAD	530	N	N	Y		Y	NAD	N	M	2.8	Y	N	A	8.8
37	21	B	housewife	7th	low	9 months	labour pain	38 w 1 d	36 w 6 d	2	FT	VD	L	PPH		31	3	V	2	Reg	85	126	72	90.00	82	118	68	84.67	10	7	6	N	NAD	230	N	N	N	N	N	NAD	N	M	2.9	Y	N	O	10.3
38	25	B	housewife	10th	low	9 months	labour pain	39 w 3 d	38 w 5 d	2	FT	VD	L	NAD	N	32	2	V	4	Reg	76	128	78	94.67	84	114	70	84.67	18	4	4	N	NAD	280	N	N	N	N	N	NAD	N	F	2.9	Y	N	O	8.6
39	20	U	housewife	10th	low	9 months	labour pain	39 w 5 d		1	FT	VD	L	NAD	N	33	3	V	5	Reg	78	116	66	82.67	80	118	74	88.67	26	2	2	N	NAD	240	N	N	N	N	N	NAD	N	F	2.5	Y	N	B	10.7
40	21	B	worker	12th	low	9 months	labour pain	37 w 4 d	37 w 4 d	3	FT	VD	L	NAD	N	33	3	V	4	Reg	80	110	68	82.00	86	124	66	85.33	8	1	1	N	NAD	290	N	N	N	N	N	NAD	N	F	2.8	Y	N	O	11.2
41	24	B	housewife	8th	low	9 months	labour pain	39 w 2 d	36 w 3 d	3	FT	VD	L	NAD	N	32	3	V	3	Reg	74	112	80	90.67	78	110	74	86.00	12	2	2	N	NAD	260	N	N	N	N	N	NAD	N	F	2.9	Y	N	O	12.6
42	20	B	housewife	9th	low	9 months	labour pain	40 w 3 d	38 w 5 d	0						32	2	V	3	Reg	68	126	72	90.00	80	122	70	87.33	28	10	9	Y	350	410	N	N	N	N	N	E	V	F	3.1	Y	N	B	10.3
43	25	B	housewife	10th	low	9 months	labour pain	38 w 5 d	37 w 2 d	1	FT	VD	L	NAD	N	32	3	V	4	Reg	92	106	80	88.67	76	102	74	83.33	22	3	3	N	NAD	250	N	N	N	N	N	NAD	N	F	2.8	Y	N	O neg	11.4
44	20	B	labourer	9th	low	9 months	labour pain	37 w	36 w 6 d	2	FT	VD	L	NAD	N	31	4	V	3	Reg	68	112	70	84.00	70	114	66	82.00	17	5	4	N	NAD	310	N	N	N	N	N	NAD	N	F	2.5	Y	N	O	10.9
45	30	B	housewife	10th	low	9 months	labour pain	39 w 4 d	36 w 1 d	0						33	3	V	2	Reg	83	106	64	78.00	96	100	60	73.33	30	15	13	N	NAD	450	N	N	N	N	N	E	F	M	3.3	N	BA	B	8.2
46	20	B	labourer	3rd	low	9 months	labour pain	37 w 5 d	39 w 5 d	2	FT	VD	L	NAD	N	32	4	V	3	Reg	78	114	62	79.33	86	112	60	77.33	7	3	2	N	NAD	330	N	N	N	N	N	NAD	N	F	3.1	Y	N	B	11.5
47	25	B	housewife	8th	low	9 months	labour pain	37 w 1 d	38 w 3 d	1	FT	VD	L	NAD	N	32	4	V	1	Reg	74	104	76	85.33	88	100	74	82.67	20	2	2	N	NAD	390	N	N	N	N	N	PT	N	M	3.2	Y	N	B	12.6
48	22	B	housewife	7th	low	9 months	labour pain	38 w 4 d	37 w 2 d	0						33	4	V	3	Reg	80	116	72	86.67	86	112	70	84.00	38	11	9	N	NAD	330	N	N	N	N	N	NAD	N	M	2.6	Y	N	A	10.1
49	20	U	housewife	8th	low	9 months	labour pain	36 w 5 d	36 w 3 d	3	FT	VD	L	NAD	N	32	4	V	4	Reg	68	108	64	78.67	80	104	62	76.00	6	2	2	N	NAD	380	N	N	N	N	N	NAD	N	F	2.7	Y	N	B	10.2
50	25	B	housewife	6th	low	9 months	labour pain	38 w 3 d	37 w 3 d	1	FT	VD	L	NAD	N	33	3	V	3	Reg	86	122	84	96.67	72	114	80	91.33	18	3	2	N	NAD	210	N	N	N	N	N	NAD	N	F	2.8	Y	N	B	10.4