

Implementation of Active Management of Third Stage of Labour (AMTSL) for Prevention of Postpartum Haemorrhage

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Abstract: ***Background:** Post - partum haemorrhage (PPH) is the leading cause of maternal mortality worldwide. Since more than 50 years AMTSL has been proposed for the prevention of PPH and is still recommended in current guidelines. The aim of the study was to reduce the incidence of PPH by strict implementation of AMTSL. **Methodology:** A short term hospital - based quality improvement (QI) project was undertaken for duration of 12 weeks. Reasons for low adherence to AMTSL protocol were analysed. Necessary interventions were done. Regular monitoring of the labour room practices was carried out to find out the outcome of interventions. **Results -** The historical data of three months before project implementation revealed that the rate of post - partum haemorrhage was 3.5 % - among 2400 deliveries in previous 12 weeks. There was significant improvement in adherence to protocol related to all three components of AMTSL Adherence rate for uterotonic administration improved from 78 percent to 96 percent, controlled cord traction rate improved from 88 percent to 98 percent and uterine massage was improved from 36 percent to 78 percent. Strict implementation of AMTSL resulted in reduction in the rate of PPH to 1.5 percent. **Conclusion:** Implementation of short - term QI project on adherence to WHO recommended protocol of active management of third stage of labour resulted in significant reduction in the rate of post - partum haemorrhage and its associated complications.*

Keywords: Postpartum Hemorrhage, PPH, AMTSL

1. Introduction

Three techniques are used in active management of the third stage of labour (AMTSL): uterine massage just after placenta delivery, controlled cord traction, and uterotonic injection. By boosting uterine contractions and lowering the number of delivery haemorrhages by three, it is a set of procedures designed to hasten placenta delivery [1]. To dramatically lower postpartum haemorrhage, further treatments like checking the placenta, checking for soft tissue lesions and fixing them, and rigorous postpartum monitoring are required (PPH). [2] [3]. A prominent cause of maternal mortality and morbidity, particularly in developing nations, postpartum haemorrhage (PPH) is a potentially fatal illness. 27.1% (661 000, 19 - 9 - 362) of maternal fatalities globally were caused by haemorrhage. [4] The main factor for obstetric bleeding is PPH. Since the third stage of labour is when PPH is most likely to occur, active management of the third stage of labour (AMTSL) can stop it from happening. [5] The management of the third stage of labour can be handled in one of two ways: expectantly or actively. However, a third strategy—sometimes referred to as the "piecemeal approach" or "mixed management"—that combines elements of the two other systems is also employed. [6, 7] However, the World Health Organization (WHO) recommended that the third stage of labour be actively managed. [8] The placenta is delivered naturally or with the help of gravity, occasionally with the help of the mother, and no intervention is required or carried out during expectant management, also known as conservative or physiological care. [9] Active management of the third stage was implemented in an effort to lessen significant blood loss during birth and the frequency of manual placenta removal. Several studies show that this strategy reduces blood loss when compared to expectant management. [10] The World Health Organization's

suggested course of action for active management includes administering uterotonic medications immediately following baby delivery, controlling cord traction, and massaging the uterine fundus. The third stage is managed using a mixed approach that combines elements of both the active and expectant approaches. Although it is typically advised to actively manage the third stage, there are various differences, and in reality, some women may actually receive mixed management. [11 - 13] Despite the fact that AMTSL's practical use can genuinely save many lives, active management's necessity is still not widely acknowledged. AMTSL is recommended by WHO, the International Federation of Gynecologists and Obstetricians, and the International Confederations of Midwives in a joint statement for all vaginal deliveries, whereas NICE guidelines only allow it for women who have a low risk of PPH and who also do not request physiological management after being informed of both options. [14] Present study was conducted with the aim of to reduce the incidence of PPH by strict implementation of AMTSL

2. Material and Methods

It was a short term hospital - based quality improvement (QI) project undertaken for a duration of 12 weeks. Study conducted at Dept. of Obstetrics and Gynaecology, Pravara Institute of Medical Sciences (DU), Loni, Ahmednagar, Maharashtra

Date collection

A modified version of a common questionnaire was written in English. Separate self - administered structured questionnaires and checklists for observations were implemented. Four sections make up self - administered structured questionnaires: knowledge evaluation, health facility variables, training factors, and sociodemographic

characteristics, each of which has nine items (11 items). The observation checklist component also comprises 16 elements. Eleven questions were used to gauge level of understanding. Participants were deemed to have weak knowledge if their scores fell below the median. Participants were regarded to have good knowledge if their scores were equal to or higher than the median. A set of 16 stages was used to gauge the student's level of practise. Those that performed AMTSL in accordance with the checklist's 16 steps were engaging in good practise. Poor practise: those who failed to accurately complete at least one of the checklist's steps. Interventions were made where needed. The labour room procedures were routinely observed to determine how interventions were working.

3. Results

The historical data of three months before project implementation revealed that the rate of post - partum haemorrhage was 3.5 % - among 2400 deliveries in previous 12 weeks. There was significant improvement in adherence to protocol related to all three components of AMTSL. Adherence rate for uterotonic administration improved from 78 percent to 96 percent, controlled cored traction rate improved from 88 percent to 98 percent and uterine massage was improved from 36 percent to 78 percent. Strict implementation of AMTSL resulted in reduction in the rate of PPH to 1.5 %.

Table 1: Sociodemographic profile

Sociodemographic profiles	No of cases	Percentage
Age		
≤ 25	30	35.29%
26 – 30	45	52.94%
> 30	10	13%
Marital status		
Single	12	14.12%
Married	55	64.71%
Divorced	15	17.65%
Widow	3	3.53%

Table 2: Adherence to protocol

Adherence of Three Components	Before study	After study
Uterotonic Administration	78%	96%
Controlled Cored Traction Rate	88%	98%
Uterine Massage	36%	78%

4. Discussion

AMTSL, a treatment that accelerates placental delivery and uterine retraction, is linked to a more than 60% decrease in PPH incidence. [15] Active management, however, may result in an increase in the diastolic blood pressure of the mother, postpartum vomiting, posterior pain, and analgesic use. [16] At the Sylvanus Olympic Togo teaching hospital, Sitti discovered a rate of 95.6% in 2016. [17] Balde et al. had discovered 96.1% in Guinea. [18] In a study conducted in 2016 at the Regional Hospital Center of Kara, E. AMOUH et al. discovered that only 50.4% of patients evacuated for postpartum haemorrhage had received AMTSL during labour. [19] It can be said that healthcare professionals have implemented good practises to raise the standard of care. The benchmark is used to evaluate the

practise of AMTSL because quality of care demands that all care be provided on an evidence - based basis. [17] It was feasible to identify the model's advantages and shortcomings through study of the outcomes. AMTSL's effective use was rated at 45.8%. This rate is greater than the 38.6% of deliveries discovered by J. SAIZONOU et al. in Benin. [20] A 2010 Senegalese assessment on the AMTSL situation indicated that 56% of the preparation stage, 83% of deliveries, and 66% of uterine massages were carried out in accordance with best practises. [21] Each country has its own standards for AMTSL quality programs. [22] A certified health professional (a midwife, doctor, or trained nurse) who has attained the competencies required to manage pregnancy, labour, and the immediate postpartum is required to provide quality maternal care services. [21] The midwife is the best person to perform the delivery, according to the WHO. Nevertheless, because they carry out the births alone, the auxiliary birth attendants were included in this study. Additionally, during their initial training, state midwives and state auxiliary midwives receive both theoretical and practical instruction in AMTSL. 56.2% of SFE practises and 35.4% of AAE practises were correct. To advance toward the Sustainable Development Goals, it is crucial to ensure that the person aiding the woman during childbirth is fully competent. [23] For all deliveries, the uterotonic injection was administered in accordance with recommended criteria. It is advised to utilise 10 IU of oxytocin to avoid postpartum haemorrhage. Although oxytocin demonstrates minimal preventive value against severe bleeding, it does reduce the likelihood of bleeding during delivery by 46%. [24]

5. Conclusion

Implementation of short - term QI project on adherence to WHO recommended protocol of active management of third stage of labour resulted in significant reduction in the rate of post - partum haemorrhage and its associated complications.

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