

Practice of Active Management of the Third Stage of Labor (AMTSL) Among Parturients at the Community Health Center of Sibiribougou in Commune Iv of the Bamako District

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doi: 10.51505/ijmshr.2023.7505

URL: <http://dx.doi.org/10.51505/ijmshr.2023.7505>

Received: Sep 13, 2023

Accepted: Sep 16, 2023

Online Published: Oct 19, 2023

Abstract

Introduction:

Active Management of the Third Stage of Labor (AMTSL) consists of a range of interventions aimed at facilitating placental expulsion by increasing uterine contractions and preventing postpartum hemorrhage (PPH) by avoiding uterine atony. Its usual components include uterotonics administration, controlled cord traction, and uterine massage after placental expulsion [1].

The objective of this study was to assess the practice of Active Management of the Third Stage of Labor (AMTSL) among parturients at the Sibiribougou Community Health Center (CS Com).

Methodology:

This was a descriptive cross-sectional study conducted at the Sibiribougou CS Com from October 11th to November 11th, 2022, for a period of 1 month. The study population consisted of all women in labor and the healthcare providers involved in their care. A total of 101 parturients and 17 healthcare providers were included.

Results:

The age group of 20 to 30 years was the most represented among parturients, accounting for 54.5% of cases. The mean age was 23.17 years, with a standard deviation of 4.33 years and ranging from 17 to 35 years. The majority of women were married, accounting for 95.05% of cases. Most women were pauciparous, accounting for 55.4% of cases. In 100% of cases, oxytocin was administered within a minute after fetal expulsion, and 75% of injections were correctly performed according to AMTSL standards. Controlled cord traction was performed in 96.3% (97) of cases. It's worth noting that out of the 97 cases, this exercise was done correctly in 67.1% of cases, which corresponds to 65 parturients. In most cases, uterine massage was performed immediately, accounting for 85.1% of cases.

In conclusion, the practice of AMTSL is systematic in the delivery room of the CS Com. However, the quality of AMTSL practice remains insufficient, as among the assessed steps, only oxytocin administration was performed in all cases, and only 75% of these were done correctly.

Keywords: Active Management of the Third Stage of Labor practice, parturient, Community Health Center, Sibiribougou.

Introduction

Active Management of the Third Stage of Labor (AMTSL) consists of a range of interventions aimed at facilitating placental expulsion by increasing uterine contractions and preventing postpartum hemorrhage (PPH) by avoiding uterine atony. Its usual components include the administration of uterotonics, controlled cord traction, and uterine massage after placental expulsion [1].

Globally, about 80% of maternal deaths result directly from complications of pregnancy, childbirth, or the postpartum period. Postpartum hemorrhage (PPH) is the most common cause of maternal deaths.

Immediate postpartum hemorrhage is defined as a blood loss greater than the amount considered physiologically normal, equal to or greater than 500ml, occurring within 24 hours after childbirth. It accounts for nearly 24% of all maternal deaths. It is unpredictable, sudden, and more dangerous in anemic women. It can lead to death in the absence of immediate and adequate care [2].

Active management of the third stage of labor is one of the low-cost and effective interventions for preventing postpartum hemorrhage. Clinical trials conducted in developed countries have demonstrated that, unlike physiological management of the third stage of labor in which oxytocins are not used and the placenta is expelled through gravity and maternal effort, AMTSL significantly reduces the occurrence of postpartum hemorrhage [3].

Compared to AMTSL, physiological management is associated with a higher rate of postpartum hemorrhage, severe postpartum hemorrhage, increased need for blood transfusion, increased need for therapeutic administration of uterotonics, and a longer duration of the third stage of labor [3].

This maternal mortality rate worldwide has declined by 38% between 2000 and 2017, from 342 to 211 deaths per 100,000 live births [4]. Despite these improvements, 295,000 women worldwide died due to pregnancy or childbirth-related complications in 2017 [4]. Sub-Saharan Africa has the highest maternal mortality rate among the seven regions of the world, with 534 deaths per 100,000 live births. It is followed by South Asia, a region that has made the most progress between 2000 and 2017, with a maternal mortality rate that dropped from 395 to 163 deaths per 100,000 live births, a decrease of 59% [4].

In Mali, according to the sixth Demographic and Health Survey (EDS VI, 2018), the maternal mortality rate was estimated at 325 deaths per 100,000 live births, despite efforts to improve prenatal care [5].

In a study conducted in 2020 in the Bamako district, postpartum hemorrhage accounted for 55.6% of all maternal deaths [6].

This also reflects the international recognition of this practice as an acceptable standard of care. Despite the effectiveness of AMTSL, there is still limited evidence of its use. Few studies have been conducted on the practice of AMTSL in primary healthcare. Our work was initiated with the aim of contributing to the improvement of AMTSL practice in order to reduce the maternal mortality rate. Therefore, we decided to study the practice of active management of the third stage of labor (AMTSL) at the Sibiribougou Community Health Center.

METHODOLOGY: The study took place at the maternity ward of the Sibiribougou Community Health Center located in Commune IV of the Bamako district. It was a descriptive cross-sectional study that took place from October 11th to November 11th, 2022, for a duration of 1 month.

The following were included in our study:

- women who gave birth vaginally during the study period on whom GATPA was performed and who agreed to participate in the study.
- claimants who agreed to participate in the study

The study population consisted of all women admitted for labor and delivery, as well as the healthcare providers responsible for their care. A total of 101 parturient women and 17 healthcare providers were included.

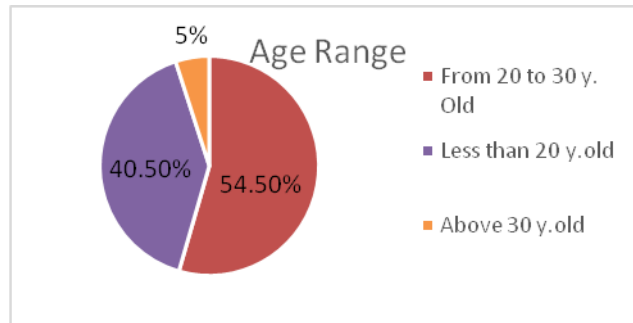
Data collection was done through interviews with the mothers using a structured individual questionnaire. The data was entered and analyzed using SPSS 21.0 software. Adherence to ethical rules related to research on human subjects was ensured. The study variables included

socio-demographic characteristics of the parturient women, socio-demographic characteristics of the healthcare providers, and the different stages of AMTSL.

Results:

Our study included 101 parturient women in whom AMTSL was performed after fetal expulsion, and 17 providers from the maternity service.

5.1. Results related to the socio-demographic characteristics of the parturients.



Graph 1: Representation of parturients according to age groups n=101

The age group of 20 to 30 years was the most represented, accounting for 54.5%. The mean age was 23.17 years with a standard deviation of 4.33 years and ranging from 17 to 35 years. The primary education level was the most common, accounting for 35.6%. The majority of women were married, accounting for 95.05%. Most of the women were multiparous, accounting for 55.4%.

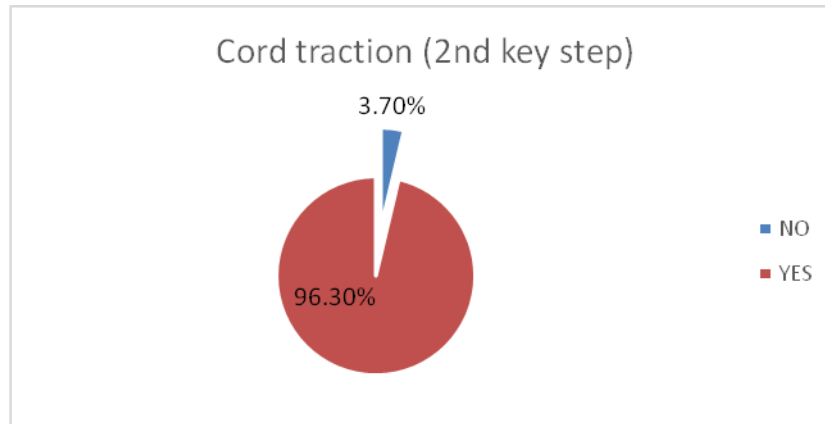
Graph 2: Representation of providers according to GATPA practice training n=101

The majority of providers had not received training on GATPA practice, accounting for 70%.

Graph 3: Representation of parturients according to the timing of oxytocin injection within one minute after childbirth (1st key step) n=101

Oxytocin was administered within one minute after fetal expulsion in 100% of cases, and 75% of injections were done correctly according to AMTSL standards.

All oxytocin doses were administered intramuscularly (IM), accounting for 100%.



Graph 4: Representation of parturients according to cord traction (2nd key step) n=101

Controlled cord traction was performed in 96.3% (97) of cases. It is worth noting that out of the 96.3 cases, this procedure was done correctly in 67.1%, which corresponds to 65 parturients.

Membrane twirling was performed in 95% of cases.

Pressure was not exerted on the uterine fundus in the majority of parturients, accounting for 99%.

The placenta was detached on the first traction in 77.2% after fetal expulsion.

The placenta was not examined in 99% of cases after detachment.

Table 1: Distribution of parturients according to the performance of uterine massage (3rd key step)

Immediate uterine massage	Counts	Percentage
YES	86	85,1
NO	15	14,9
Total	101	100,0

In most cases, the uterus was massaged immediately, accounting for 85.1%.

Soft parts were examined in 97% of cases, which corresponds to 98 women.

In most cases, the uterus was massaged immediately, accounting for 85.1%.

Soft parts were examined in 97% of cases, which corresponds to 98 women.

Comments and Discussion

Frequency

The study involved 101 parturients and 17 providers, including 7 midwives, 8 nurses, and 2 matrons. The study revealed that the practice of AMTSL (Active Management of the Third Stage of Labor) is systematic in the delivery room at the Community Health Center of Sibiribougou,

accounting for 100% of cases. Our data is comparable to that of G J TCHIAKPE [18]. In their study, the practice of AMTSL was systematic. A study conducted in France by Putod A. in (2012) [19] reported an effectiveness rate of AMTSL practice at 96.67%.

This systematic practice of AMTSL has been reported by several other authors, including KONATÉ O [20] in their study in Commune V of the Bamako district in 2013, and KEITA AM. [21] in the practice of AMTSL at maternity units in five CSComs of Commune V in the Bamako district in 2013.

Sociodemographic data

Age

In our study, the age group of 20 to 30 years was the most represented. The mean age was 23.17 years with a standard deviation of 4.33 years, and the range was between 17 and 35 years. Our data is relatively comparable to that of G J TCHIAKPE [18], who reported that the age group of 20 to 34 years accounted for 65.2%; the mean age was 26.3 ± 7 years, with a range of 15 to 45 years. Our rate is lower than that of the study conducted in 2013 by KEITA AM [21], where the age group of 20 to 34 years was the majority at 78%. The mean age in their sample was 27 years, with a range of 17 to 36 years. RPMPP [1] in Benin found that the majority (84.8%) of women in labor were in the age group of 20 to 34 years.

Parity

In our series, the majority of women were pauciparous (having given birth few times). In the study by GJ TCHIAKPE [18], both multiparous and pauciparous women were represented at 35.2% each. Saizonou J. et al in 2012[23] reported 44.2% multigravidae and 9.8% multiparas in Benin. RPMPP [1] reported that slightly less than half (45.6%) of them were nulliparous or primiparous.

This representation of pauciparous women could be due to chance.

AMTSL Training:

According to the results, the majority of the providers included in our study had not received training on AMTSL in 70.3% of cases, while 29.7% of providers had received training. Our data is closer to that of KEITA AM [21] and Kamissoko M. [22] in Commune V, who found 65% and 66%, respectively, of healthcare workers not trained in AMTSL. Similarly, G J TCHIAKPE [18] reported that more than half of their sample (53.5%) had not received AMTSL training.

On the other hand, some previous studies have reported better results, such as KONATÉ O [20] in the maternity unit of five (05) staff members, who reported 64% of personnel trained in AMTSL, and RPMPP [1] in their national survey conducted in Benin [1], which reported 62.2% of personnel trained in AMTSL in pilot sites.

This low proportion of trained providers could be explained by the lack of personnel development policy in the services.

Steps of AMTSL (Active Management of the Third Stage of Labor):

Administration of Oxytocin:

In our study, after confirming the absence of another fetus in 100% of cases, oxytocin was administered within one minute following fetal expulsion in all women. We observed that 75% of injections were correctly administered intramuscularly according to AMTSL standards. Our findings are relatively comparable to those of Gladys Joceline TCHIAKPE [18], who found that out of 214 cases, oxytocin administration within one minute after childbirth was adhered to in 195 cases (77.1%), although all parturients in their study received an oxytocin injection. Our rate is lower than that of KEITA AM [21], where oxytocin administration was performed in the majority of parturients in their study, accounting for 99.5% of cases. Our results are consistent with a study conducted in Benin by Saizonou J et al in 2012 [23], where the timing of oxytocin administration in the context of AMTSL was adhered to in 75.3% of cases. However, our data is better than that of RPMPP [1], which reported that oxytocin was correctly administered in 61.3% of women.

Controlled Cord Traction and Counter Pressure:

During our study, controlled cord traction was performed in the majority of cases. Our result is consistent with those of Saizonou J et al [23] and RPMPP [1], where controlled cord traction was correctly performed in 65.5% and 65.3% of women, respectively. Our proportion is lower than that of G J TCHIAKPE [18], who revealed in their study that controlled cord traction combined with counter pressure was done in 216 women, accounting for 85.4% of cases. On the other hand, Putod A [19] in their study conducted in France reported that controlled cord traction was correctly performed in 10% of cases.

Uterine Massage:

In our study, uterine massage was performed immediately in most cases. According to G J TCHIAKPE [18], it was practiced in their study on 241 (95.3%) patients by healthcare providers. Patient self-massage was performed in 198 (78.3%) cases after being trained by healthcare providers. In the study by Saizonou J et al. [23], uterine massage was performed by the birth attendant in 99.4% of cases and by the parturient in 83.3% of cases. Putod A. [19] reported 53.33% of cases of uterine massage in their study. RPMPP [1] found that uterine massage was correctly performed in only 34.6% of women.

These shortcomings, which exist between the use of oxytocin and controlled cord traction, as well as between controlled cord traction and uterine massage, could be explained by a lack of training on AMTSL.

Conclusion:

The practice of AMTSL was systematic in the delivery room of the Community Health Center. However, the quality of AMTSL practice remained insufficient, as only oxytocin administration was consistently performed in all cases, with 75% of them being correctly administered. Furthermore, we observed inconsistencies between the use of oxytocin and controlled cord traction, as well as between controlled cord traction and uterine massage. This could be

attributed to a lack of training on AMTSL. The absence of provider training is the main cause of this insufficient practice compared to national standards.

Conflict of interest: None.

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Abbreviations

Accht: Childbirth

ATCD: Antecedent

BDCF: Fetal Heart Noises

CHU: University Hospital Center

CSRéf: Reference Health Center

cm: centimeter

CPN: Prenatal Consultation

CIV: Commune I V

AD: Active Deliverance

DN: Natural deliverance

F: Frequency

FIGO: International Federation of Gynaecologists and Obstetricians

HRF: Risk Factors for Hemorrhage

FFI: Acting internally.

GATPA: Active Management of the Third

HDD: Deliverance Hemorrhage

PPH: Postpartum hemorrhage

HPPI: Immediate postpartum hemorrhage

I*M: Intramuscular

CIMC: International Confederation of Midwives

IV: Intravenous

Mn: Minute

MS: Ministry of Health

N: number

MDG: Millennium Development Goal

WHO: World Health Organization

°C: Degree Celsius

P: Period

PHPP: Prevention of postpartum hemorrhage