

Implementation of Active Management of the Third Period of Childbirth (AMTPC/ GATPA) For The Prevention of Immediate Post-Partum Bleeding in Four Regional Maternity Hospitals of Guinea (Conakry)

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Abstract

Objectives: To determine the frequency, skills level of health care service providers; to identify complications and difficulties related to the implementation of AMTPC/GATPA.

Methodology: It was about prospective study, descriptive of 6 months (March 1st to August 31st, 2014) carried out in the maternity hospitals of Faranah, Kindia, Mamou and Nzérékoré. It concerned the parturient women who had recently given birth and the personnel that carried out AMTPC /GATPA in these hospitals.

Results: During the study period of 1,254 out of 1,305 births had benefited of AMTPC/ GATPA, a frequency of 96.1%. The midwives were the most represented personnel in the implementation of GATPA (44.1%). In 46.4% of the cases, the health care service providers acquired this competence from the initial training. The release was obtained in the first trial in 64.9% cases. The duration of implementation of GATPA was less than 5 minutes in 72.6% cases. The different stages were respected in 91.5% cases. Complications were dominated by retention of placental fragments (10.2%). Lack of oxytocin was the main difficulty (36.6%).

Conclusion: The sustainability of this achievement would depend on the systematic and correct implementation of AMTPC /GATPA at all childbirth attendants and the effective management of oxytocin.

Keywords: Implementation, AMTPC /GATPA, Maternities, Guinea.

Introduction

Immediate post-partum bleeding (HPPB) refers to a blood loss of ≥ 500 CC within 24 hours after childbirth [1-3]. Uterine atony is the main cause [2, 4]. Its frequency varies: 4.5% in France in 2013, 5.1% in Canada in 2007, 10.8% in Latin America in 2009, 1.4% in Morocco in 2002, 54% in Tunisia in 2015, 0.2% in Niger in 2010, 4.7% in Togo in 2016, 3% in Guinea at the National Hospital Donka in 2009 [5-12]. It occurs unexpectedly in almost two-thirds of pregnant women, even without any identifiable risk and is responsible for more than 50% of maternal deaths worldwide in less than two hours if it is not taken care of [13, 14]. In sub-Saharan Africa,

47.2% of maternal deaths are attributable to it [15]. In addition, it causes significant long-term morbidity [15]. It can be prevented by GATPA which includes the administration of a tonic utero drug (oxytocin 10 IU, the medication of choice); controlled traction of the umbilical cord and uterine massage after delivery [9, 14, 16].

GATPA reduces the prevalence of PPH due to uterine atony by almost 60%; the need for blood transfusion (with the medical risks, hospitalization and associated costs); and poor health or death [18-20]. It is an easy intervention, possible at low costs and based on scientific evidence [20, 22, 23]. Its establishment requires the presence of a qualified service provider (doctor) at the time of Delivery

[24]. The objectives of the study were to determine the frequency, of skill level of the service providers (Doctors); identify complications and difficulties related to the implementation of GATPA.

Methodology: It was about prospective study, descriptive of 6 months, from March 1st to August 31st, 2014) carried out in the regional maternity hospitals of Faranah, Kindia, Mamou and Nzérékoré. It concerned the parturient women who had given birth and the personnel that carried out GATPA in these hospitals.

We recruited everything from the patients and the service providers who accepted it. The parameters studied were frequency; the competences/skills of the service provider; complications and difficulties associated with the implementation of GATPA.

Result

A. Frequency: During the period of study, 1,254 out of 1,305 births had received help from GATPA, a frequency of 96.1%

B. Competence of service providers (Doctors):

1. Table 1: Professional status and type of training

Professional status	Effective	Percentage
Doctor	144	11,0
Midwife	575	44,1
Nurse	110	8,4
Medical Assistants	476	36,5
Type of training		
Initial training	605	46,4
Structured on- the-job training	319	24,4
On-site training	381	29,2

2. Infection prevention Standards (IPS): four hundred and forty-eight (448) patients out of 1305 (34.3%) had benefited from the correct use of IP standards against 65.7%.
3. Labor duration: For 627 delivered out of 1305 (48%) the labor lasted between 6 - 12 hours, for 27% less than 6 hours and for 25%, it was less than 6 hours.
4. Time between expulsion and injection of oxytocin: Nine hundred and forty-seven (947) delivered out of 1305 (72.6%) oxytocin before the 60th second compared to 25.1% for one minute or more.
5. Number of trials: In 847 out of 1305 cases (64.9%), the delivery was obtained at the first attempt.
6. Result: In 1267 out of 1305 (97.1%), active delivery was successful against 2.9% failure.
7. Duration: For 947 delivered on 1305 (72.6%) the procedure lasted less than five minutes compared to 25.1% for 5 to 10 minutes.
8. Respect for the steps: In 1194 cases out of 1305 (91.5%), the GATPA steps were respected against 8.5%.
9. Tool filling: For 983 of 1305 (75.3%), the management tools

were filled correctly.

C. Table 2: Complications

Complications	Effective	Percentage
Break cord	9	0,7
Uterine inversion	4	0,3
Retention of placental fragments	133	10,2
no complication	1159	88,8

1. **Difficulties:** 478 out of 1305 childbirths (36.5%), lacked oxytocin and in 234 cases out of 1305 childbirths (17.9%), no staff were available.

Discussion

A. Frequency: According to this frequency found in our series varied proportions are noted in the literature: 46% in Nicaragua in 2007, 84% in Madagascar in 2013, 88.7% in Zambia in 2010, 94% in six countries of sub-Saharan Africa, 98% in Niger in 2010, 95.6% in Togo in 2016 on the other hand, Reyat's series and al. in 2002, the management of the 3rd period of childbirth was with systematic oxytocin infusion in the immediate post-partum period followed by broad indications of uterine revisions in the presence of risk factors or early bleeding [11, 25-29].

The high frequency in our series would be explained by the fact that on the one hand, all staff are to be trained beforehand and on the other hand, since its integration into the minimum activity package of the maternity, all women who gave birth by basis way generally benefit from active delivery.

B. Competences/skills of service provider: in our group, midwives and Medical assistants got the highest percentages (44.1% and 36.5% respectively) in the implementation of GATPA. The finding was similar in Madagascar studies with 70.3% and 68.9% respectively in 2011 and 2013 [26, 30]. For Fenomanana M. S and al. the shortage of competent personnel in the prevention and management of post-partum bleeding would be a pre-disposing factor in maternal death [31].

The result would be justified by the predominance of these listed categories -in our sites compared to other service providers (doctors and nurses). However, the share of doctors was not negligible.

Initial training had the highest proportion (46.4%) in the acquisition of skills in GATPA. According to Linda B. and al. in six sub-Saharan African countries (Ethiopia, Kenya, Madagascar, Mozambique, Rwanda and the United Republic of Tanzania) and Prendeville WJ. and col. this proportion was 36% for all types. Our result would be related to the integration of this skill into the training programs of medical students and midwives for almost 10 years in our country [28, 32]. For our collective/group, the norms of infection prevention were observed correctly in 34.3% of cases.

However, this observation was 47.1% in 2012 and 74% in 2011 respectively in Benin and Madagascar [14, 30]. This high frequency of non-compliance with IP rules should both worry us about the risks faced by clients in our centers on the one hand and remind us that infection occupies a good place among the direct causes of maternal deaths [33, 34]. This result would be justified by the incorrect wearing of personal protective equipment by health service providers to direct delivery, non-compliance with the stages of material processing and / or waste disposal. In our population, 48% of women who gave birth had a labor time between 6 and 12 hours.

The finding was similar in African literature [8, 35]. This high proportion would be due to the high representativeness of the primi and pauci pares in our sample. It will be remembered that a long duration of labor in childbirth would be a risk factor for post-partum bleeding due to uterine atony. The 10 IU of oxytocin was administered to 72.6% of our childbirths within the first minute of birth. Linda B [28] and Justin RR et al. in the multi-center study conducted in six countries of sub-Saharan Africa in 2015, 52% and 21% respectively in the Madagascar study in 2011, in contrast to the other authors who recorded the highest proportion after the first minute [30, 27, 32]. For 6 out of 10 births (64.9%) of our group, active delivery was obtained at the first attempt. This is explained on the one hand by the fact that oxytocin (10 IU), administered intramuscularly, is the agent (and the route of administration) to be preferred for the Prevention of PPH in the context of vaginal deliveries do not accompanied by only low risks and on the other, by the mastery of the technique by majority of health service providers of our structures. Active delivery was a success for 97.1% of our childbirths [36].

This result was very close to the 97.7% reported by Linda B in six sub-Saharan African countries [27]. It is this that GATPA constitutes a safe intervention, cost-effective and sustainable, more humane and ethical process than the management of complications of PPB, especially for women already suffering from anemia or malnutrition [19, 21]. In 72.6% of cases, the procedure lasted less than five minutes. The finding was similar in the literature [32]. It would be due to the rapid action of oxytocin and the controlled traction of the umbilical cord from the first uterine contraction to extract the placenta. 91.5% of our childbirths, the stages of GATPA were observed. Lower proportions are reported in the literature: 13% in two Madagascar studies in 2011 and 2013 and 0.5 to 32% in seven developing countries [26, 30, 37]. According to Cynthia developing countries do not aim at reducing post-partum bleeding as an achievable goal [37]. They make little use of active support for the third phase of labor and policies regarding this support are often contradictory. These 8.5% of non-compliance with the three stages of active delivery were related to the lack of controlled traction of the umbilical cord, counter pressure and lack of uterine massage. For 75.3% of our childbirths, the management tools were properly filled. This proportion was 80.5% in the Saizounou J. and al series in Benin in 2012 [14]. The forgetfulness of CPN notebooks, the lack of motivation of some health service providers could justify this insufficiency.

C. Complications and difficulties:

The retention of placental fragments had the highest proportion (10.2%) in our population. This finding would be linked

to the incomplete execution of steps GATPA by the health service providers on the one hand and the failure of the managers to supervise the activities of the structures/hospitals. For 4 out of 10 childbirths (36.5%), lack of oxytocin in our series. This result is superimposed on the 23% recorded in the multicenter conducted study in six countries of sub-Saharan Africa and 25% recorded in 55 care facilities in the United Republic of Tanzania but significantly lower than the zero percent out of stock in the Beninese study in 2012 [14, 28]. By contrast, the availability of oxytocin was, according to WHO, almost universal in seven developing countries [37]. Our result would be related to lack of correct estimation of needs and the inefficient supply system of oxytocin to maternity hospitals.

Conclusion

The sustainability of this result on the study sites would be at the cost of systematic and correct implementation of GATPA in all childbirths, the effective management of oxytocin and regular supervision of activities.

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