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Original Research Article

Place of the misoprostol in 600 µg in intrarectale in case of hemorrhage of the post partum by uterine atony at the Befelatanana University Hospital Centre of Obstetric Gynecology in Antananarivo, Madagascar

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ABSTRACT

Background: The hemorrhage of the post-partum (HPP) represents a major problem of public health because it hires the vital and obstetrical forecast of the mother in case of delay of taking care. Present study aims at assessing the effectiveness of the administration of 03 tablets of misoprostol in intra-rectal in the taking care of HPP by uterine atony and to determine the épidémio-clinical profile of HPP by atony.
Methods: Authors performed a retrospective and descriptive study concerning the effectiveness of the misoprostol in the taking care of HPP by uterine atony. This study started from December 1st, 2016 till March 31st, 2017. The data processing was performed by Epi info 7 and Excel.
Results: The rate of HPP represented 3.8% deliveries which 69.4% was due to uterine atony. HPP by uterine atony represented 2.60% deliveries. It happened at the women from 25 to 34 years old (46.16%), pauciparous (76.93%), with a lower working time at 8 hours (71.15%) and having performed at least 4 CPN (63.47%), giving of urgent babies with a medium weight of 3073.43 g. The administration of the misoprostol was efficient in 90.40% and we noticed no side effect or of serious complications during the taking care of HPP by uterine atony.
Conclusions: HPP remains another major preoccupation of the obstetricians in our country because it is an emergency that can put into play the vital forecast and which requires a catch in quick load. The administration of 03 tablets (600 µg) of misoprostol in intra-rectal during HPP by uterine atony deserves its place in the armory of taking care because it is a sure method, efficient and easy to manipulate.

Keywords: Atony, Emergency, Hemorrhage, Misoprostol, Obstetrical, Uterotonic

INTRODUCTION

In spite of undertaken efforts concerning pregnancy and delivery, maternal mortality remains still relatively high in Madagascar. The hemorrhage of the post-partum constitutes one of the first reasons of maternal deceases everywhere in the world. Every year 132.000 women die further to hemorrhages attributable to delivery.[1] It is the reason of more than 30% maternal deceases in Africa and in Asia and in the world a woman dies every seven minutes.[2-3]

The definition of the hemorrhage of the post-partum (HPP) is the upper loss of blood in 500 ml during first 24

hours which follow delivery. Serious HPP is defined as a loss of blood of more than 1000 ml.[4] It is the main reason of maternal mortality in countries with top, means and especially in weak income.[5] In its strict form it represents a vital and obstetrical emergency.[6] HPP is an epidemic due especially to uterine atony.[7]

This study aims on one hand at assessing effectiveness and feasibility of 3 tablets of misoprostol in intra rectal in the taking care of HPP by uterine atony and in other part to determine epidemioclinical profile.

METHODS

It was about a descriptive retrospective study concerning the use of 03 tablets of misoprostol managed in intra-rectal in the taking care of the hemorrhage of the post-partum by uterine atony to at the Befelatanana Obstetrics and Gynecology Hospital Center (CHU) from Antananarivo, Madagascar from 1st December 2016 to 31st March 2017.

Author studied all women having introduced a hemorrhage of the post partum continuation in a delivery by low way or by caesarian section.

Are includes all women having introduced a hemorrhage of the post-partum by uterine atony in first 2 hours after delivery by low way or after a caesarian section.

All women having introduced HPP by uterine atony are excluded with instability hémodynamique hiring immediate vital forecast and HPP due to other reasons than atony and one counters indication in the use of the misoprostol.

Author kept as criterion of effectiveness a stopping of bleeding at the end of 20 minutes with a good uterine globe and a hemodynamic stability.

The socio demographic profile of patients, parameters linked to pregnancy and delivery, valuation of the effectiveness of method were measured.

The analysis of data was treated by software ear information 7 and Excel.

RESULTS

Author recorded 75 cases of HPP on 1940 deliveries (3, 8%) which 52 cases (69.4%) were owed to a uterine atony accomplishing a 2.60% frequency.

The peak of frequency was between 24-34 years (46.16%). The age was of 28, 93 years (14-45).

The 44.23% women were pauci gestures with an average of 3.24 (1-9) and pauciparous represented 76.93% patients average of which was 2.03 (1-8).

The women come from disadvantageous middle in 67.30% cases (Table 1).

Table 1: Sociodemographiques characteristics of patients.

Parameters	Numbers (n=52)	Rate (%)
Age 24 to 34 years	24	46.16
Gravidity pauci gestures (≤G2)	23	44.23
Parity Pauciparous (≤P2)	40	76.93
Low Socio-economic level	35	67.3

Parturient had an urgent pregnancy in 70% cases with a medium age of 38.38 HER (21-43).

Less than 04 CPN was recorded to 63.47% patients and the pregnancy took place in a normal way at 29 patients (75%).

The low way (69.23%) was the mode of delivery where most hemorrhage of the post-partum by uterine atony was noticed.

Table 2: Summary picture of clinical profiles of the pregnancy and of delivery.

Parameters	Number (n=52)	Rate (%)
Gestational age 37 to 41 HER	36	69.23
Prenatal consultations		
≤4	33	63.47
>4	19	36.53
Pregnancy		
Normal	39	75
Pathological	13	25
Births		
Normal away	36	69.23
Caesarian section	16	30.77
Working time		
≤8 h	37	71.15
>8 h	15	28.85
Birth weight		
<2500 g	9	17.30
2500-3500	29	55.77
>3500	14	26.93
Blood transfusion		
None	27	52
<2 pockets	21	40.4
≥3 pockets	4	7.6

The working time was between 1-8 o'clock in 71.15% average of which was of 6, 8 hours (1-16).

The hemorrhage of the post-partum by uterine atony happened with an including born weight enter 55.77% patients 2500 g and 3500 g. Medium born weight was of 3073.43 g (950-5500).

Blood transfusion was accomplished in 48% cases, with a medium number of pockets transfused into 1. It was pointed out in 30.70% cases after a delivery by low way and in 17.30% after a caesarian section (Table 2).

About 3 tablets of misoprostol in intra rectal were efficient in 90.40% cases (Figure 1).

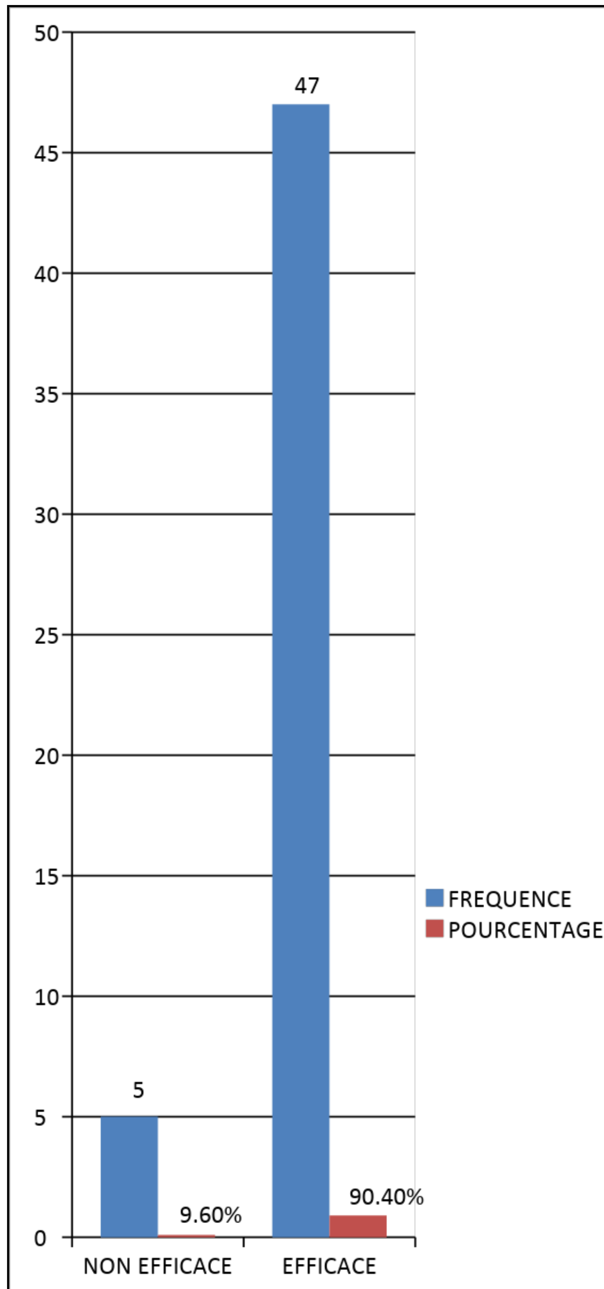

Figure 1: Distribution according to the effectiveness of misoprostol.

DISCUSSION

Authors recorded 75 cases of HPP on 1940 deliveries (3.8%) which 52 (69.4%) were owed to a uterine atony. HPP by atony represents 2.60% deliveries during the period of study.

In 2010, Deneux Tharaux and al brought back a rate of higher HPP in 6.4% and a rate of strict HPP in 1.6% deliveries.[8]

Uterine atony represents the first reason of l' HPP because she complicates 2 - 4% deliveries.[9] This situation corresponds well to our study because 52 cases (69.4%) on 75 HPP were due to an uterine atony and which complicates 2.6% deliveries while between 1994 and 2006, Callaghan and al recorded an increase of the impact of HPP by uterine atony going from 1.6% to 2.4%.[10]

In our series and in a Moroccan study, HPP by atony happens especially at the young women's between 25 - 34 years (46.16%), she is more frequent at the older women's in the developed countries or conception is later in comparison with the poor countries.[11,12] However, Wangala et al, did not find the influence of maternal age in the happening of a hemorrhage of deliverance.[13]

The multigestity was known for a long time as a factor favoring of HPP by uterine atony while she happens especially at the women's pauci gestures with a 44.23% rate in our series.[14] This rate is 27.7% in a newyorkaise study and Zeteroglu et al, in Turkey brings back an even weaker rate of 8.3%.[15,16]

The paucipares women represented 76.93% of cases in our series while some studies show the high frequency of multiparity in the happening of HPP by uterine atony.[11-17]

Alihonou et al, bring back that 39.74% primiparous introduced HPP by uterine atony while multiparous and multiparous big introduced a 60.26% rate.[18] More recent studies accomplished in the developed countries bring back that the primiparity is identified now as a risk factor of HPP.[19]

The majority of the parturient had a low socioeconomic level (67.30%), it compounds with some studies which brought back that quasi totality of the patients introducing HPP by atony came from a disadvantaged background.[11] In Zimbabwean community, maternal owed mortality in l' HPP is more frequent in rural zone than urban.[20]

There is a contrast between the poor countries and the developed countries. Indeed, in developing countries, the maternal mortality due to hemorrhage is about superior 100 times to what it is in developed countries, while in developed countries the hemorrhages of the post partum have tendency to move back progressively.[21]

Term pregnancies were noticed in 69.23% cases of HPP by uterine atony while authors bring back that term does not seem to intervene in the happening of a hemorrhage of the post partum.[22]

During this study, the delivery by low way was the most displaying in HPP by uterine atony with a 68.64% rate against 31.36% for operations caesarian sections. On the

contrary, some authors found almost three times more hemorrhage by uterine atony in case of caesarian section in comparison with delivery by low way.[23] Studies bring back that programmed Caesarian section was linked to a risk augmented by strict HPP in comparison with delivery by spontaneous low way and that the caesarian section accomplished immediately in the course of job still augmented this risk of 55% in comparison with programmed caesarian section and we also share this opinion because we noticed 23.52% of HPP by uterine atony in case of caesarian section immediately against 7.84% in case of programmed caesarian section.[19]

During this study, HPP by atony happens especially at the women's whose working time is less at 8 am (71.15%) but a study accomplished in Morocco brought back a longer working time showing 12 hours to parturient having introduced a hemorrhage of the post partum by uterine atony.[11] He is admitted that there is a relation between the working time and the happening of HPP by atony. A muscle which works in an extended way ends up exhausting itself and imposing complete rest on organism while a muscle which works shortly with a maximum intensity tears and also imposes rest on organism to recover. The same is true for the uterine muscle, an extended job or on the contrary a quick job can train a uterine atony.[22]

HPP by uterine atony happens especially in cases of fetal macrosomia 24 but this situation was not noticed in our study because a born weight of 2500 g in 3500 g was linked in l' HPP by uterine atony in 60.38% of our cases and the upper born weight in 3500 g was only recorded in 26.93% cases.

It is function of the initial state of the patient. Blood transfusion was practiced at 48% of our patients. This rate is high in comparison with the data of literature. Indeed the indication of blood transfusion varies from an author to the other one and can go from 10 to 30%.[22]

Authors transfused an average of a pocket while authors bring back a higher number.[25] Most available studies describing the distribution of blood losses concern deliveries especially by low way, but some historical studies brought back a blood post loss-partum higher average during a caesarian section while during our study, blood transfusion was accomplished after a delivery by low way in 30.70% cases against 17.30% after a caesarian section.[19]

The institution of the uterine globe in 20 minutes after the administration of 3 tablets of misoprostol (600 µg) in intra-rectal led in stopping of hemorrhage and in hemodynamic stability in 90.40% cases.

Sojai et al, performed one study of 41 parturient having introduced HPP by uterine atony on the administration of 1000 µg of misoprostol in intra-rectal after failure of the ocytocine leading to a rate of 63% success with stopping of hemorrhage in 10 minutes after administration of the misoprostol.[26]

Some authors maintain that the misoprostol linked to oxytocic accentuates even more the reduction of the prevalence of the strict hemorrhages of deliverance as well as them that of hemorrhages of deliverance in dress rehearsal and others bring back that among the women who received from the oxytocin during GATPA, the misoprostol was efficient in 89% for the control of hemorrhage in 20 minutes according to the initial treatment but during our study the effectiveness summer got only after the failure of use of oxytocin and a study led in Ecuador highlighted that the administration of 600µg of misoprostol in sublingual in the treatment of HPP, after use of 10 UI of Syntocinon in intramuscular during the 3rd stage of job, drove on 50 cases to the stopping of bleeding in 20 minutes.[27-29]

Side effects of the molecule exist. Fever and shiver are undesirable effects peculiar to the misoprostol but their appearance depends on the managed dose.[30] Authors bring back, during the treatment of HPP, upper hyperthermia in 40ºC with a dose of misoprostol in 1000µg that it is per bone, intra-rectal, intra-vaginal or sublingual on the contrary these effects regress by diminishing the dosage of the misoprostol.[31] They note therefore that more the dose of misoprostol is high more intense are undesirable effects. With a dose of 600µg of misoprostol per bone, the upper hyperthermia in 40°C was brought back with a rate only of 0.1% while El Rafay finds a hyperthermia linked to shiver to 62% patients after administration of 600µg of misoprostol per bone.[32,34]

A hyperthermia linked to frenzies was recorded during the administration of 800µg of misoprostol per bones or in sublingual.[33]

In literature some studies recorded no side effect and serious accident concerning the administration of the misoprostol in intra-rectal in the taking care of HPP by uterine atony but digestive disorders with abdominal type of nausea, pain and vomiting were described after administration by oral way. The authors agree that the appearance of side effects of the misoprostol depend of two parameters: dosage and way of administration.[26,34-35]

The misoprostol by oral way and sublingual procreates more undesirable effects in organism than the rectal way and no serious accident was brought back by rectal way in literature what we noticed because with a dose in 600µg of misoprostol our rate of effectiveness is close to that described in literature with higher doses and with the way intrarectal we noticed no undesirable effect at our patients.[30,36]

Next to any cal use of the misoprostol has advantages because it is a stable medicament in the surrounding temperature and not very expensive, easy to be

manipulated and do not require means of specific conservation.[37]

CONCLUSION

The hemorrhage of the post-partum constitutes the first reason of maternal mortality. Uterine atony is the first reason. She is unforeseen and can happen in all periods of the pregnancy. She can touch all pregnant women whatever is the age and whatever is the mode of delivery.

Authors led a study to assess the effectiveness of 03 tablets of misoprostol in the taking care of HPP by atony by intra-rectal way. Method allowed obtaining a good result in the taking care of HPP by uterine atony with a rate neither of success near 90% and without undesirable effects nor of serious complication. This method must be applied in first intention after failure of the oxytocin in front of all HPP by atony because the molecule is easy to manipulate, not very expensive, without particular conservation and without side effects. Its use must be introduced into the armory of the taking care of HPP.

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