

The use of Misoprostol for birth Induction in Maternal Child Hospital In Gurupi-To City

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Abstract— Objective: To analyze the main factor that has led to the use of misoprostol in labor induction at the Maternal Infant Hospital in the city of Gurupi - TO. **Method:** We analyzed 999 (nine hundred and ninety-nine) medical records that correspond to the total number of deliveries performed by the Hospital, of these, only 59 patients used misoprostol and were notified at the unit between March and August 2016. After data collection, the data were descriptively analyzed using the Microsoft Excel® version 2010 program, and the results were presented through graphs and tables. **Results:** There was a significant difference between the number of pregnant women who used misoprostol to induce miscarriage 40 (100%), the dominant age group was > 20 years 33 (82, 50%); with gestational age <40 weeks 37 (92, 50%); having its indication of induction for other reasons 33 (82, 50%); Regarding marital status, single women predominated, 31 (77, 50%); brown race, 34 (85.0%). **Conclusion:** It is noted that the use of misoprostol is effective in inducing labor, but its indications are restricted to certain situations.

Keywords— Labor; Induction; Misoprostol.

I. INTRODUCTION

Pregnancy is a sensitive period in women's lives that finish with childbirth that can be natural or induced. Obstetricians recommend that this phenomenon occurs naturally, but in some situations, it is not possible to do so. The most common complication is the lack of maturation of the cervix, which often poses a risk to the fetus.(BARBOSA; CAMPOS, 2013; RANGEL FILHO et al., 2007). In most pregnancies, childbirth begins spontaneously between 37 and 42 weeks. Softening and shortening of the cervix occur, the membranes rupture, the uterus dilates and contracts to expel the baby. Induction is the artificial stimulation of uterine contractions to perform the childbirth before spontaneous onset, these stimuli that trigger the process are called of childbirth inducers.intending to certify the birth of the child at a certain time when it is estimated that the baby is safer outside the womb than inside (ARAÚJO et al.,1999).

Induced childbirth, therefore it is indicated when spontaneous childbirth would result in risks. Induced labor, therefore, is indicated when spontaneous labor would result in risks. With all, it should only be induced if there is a condition of beginning and ending (MORAES FILHO et al., 2005; PASSOS et al., 2011).

Misoprostol is a synthetic prostaglandin E1 analog developed for the treatment of stomach ulcers, due to its ability to cause uterine contractions, is adopted by obstetricians to induce childbirth in patients with complications, because the main purpose of obstetrics is to reduce the amount of cesarean delivery and to avoid possible complications that pose risks to the mother and fetus. According to Santos Filho, Andrade and Miranda (2009) in Brazil, the effectiveness of misoprostol has been accompanied by scientific basement,it is also evidenced in the practice of childbirth induction. According to these authors, despite the efficacy of this drug, its application

should only be used by suitable professionals and establishments, aim at ensuring the effectiveness of the method.

In the municipality of Gurupi, this reality is no different with regard to the use of misoprostol in childbirth induction, this practice is increasingly being adopted among local obstetricians. Given this problem, an investigation was made of the medical records of patients treated at the Gurupi — TO maternal Infant Hospital to verify the main factor that has led to the use of misoprostol to induce childbirth.

II. MATERIAL AND METHODS

This research was authorized by the Nucleus for Teaching and Research (NTR) of the Regional Hospital of Gurupi - TO and by the Research Ethics Committee (REC) of the UNIRG University Center. This research is an exploratory quantitative descriptive study, held at the maternal and children's hospital of Gurupi – TO, through the analysis of 999 (nine hundred and ninety-nine) records that correspond to the total number of deliveries performed by the Hospital, it's from patients who used misoprostol and were notified in the unit between March and August 2016.

From the total of medical records analyzed, 59 cases were selected, in which misoprostol was used to induce childbirth, soon after, they were analyzed based on the selected parameters and the following variables were observed: (age, marital status, race, gestational age, induction indication). Inclusion criteria were the medical records of pregnant women who used misoprostol and had a medical follow-up at the hospital. Being are excluded Incomplete or erased medical records because they do not contain sufficient information, and medical records of patients who did not use misoprostol. After collection, the data were descriptively analyzed using the Microsoft Excel® version 2010 program, and the results were presented through tables and percentage.

III. RESULTS AND DISCUSSION

We analyzed 999 medical records of pregnant women who had their deliveries at the maternal and children's Hospital, between March and August 2016, and from these, we selected the cases in which misoprostol was used to induce childbirth. The following data correspond to the discussion of the present study.

Table.1: Characteristics of parturients who used misoprostol to induce normal childbirth at the maternal Infant hospital in the municipality of Gurupi-TO from March to August 2016.

Variable	n	%
Age		
>20	8	66,67
<20	4	33,33
Total	12	100
Gestational Age		
>40 weeks	7	58,33
<40 weeks	5	41,67
Total	12	100
InductionIndication		
HypertensiveSyndrome	4	33,33
Postdatism	8	66,67
Total	12	100

Regarding the distribution of cases with characteristics of parturients, who used misoprostol to induce normal delivery, Regarding the distribution of cases with characteristics of parturients, who used misoprostol to induce normal delivery, the frequency of cases increased with age, with a higher incidence of cases in the age group above 20 years (66.67%) (Table — 1). Sampaio et al. (2004) show that the number of pregnant women over 20 years old who underwent misoprostol use is significant, pointing out that there has been an increase in the number of cases where the use of this medicine progresses with the age of the patients, The analysis of the data collected in the study reveals that the use of Misoprostol as inducer of normal delivery reached a greater proportion among pregnant women over 20 years old (58.7%), compared to pregnant women under 20 years old (46.7%) the use was lower.

Aquino (2001) in his study with a total sample of 105 pregnant women, also observed that the use of Misoprostol as a measure of induction of normal delivery was 19 indications with pregnant women under 20 years (18.9%) and 86 indications. For pregnant women over 20 years old (81.91%). Regarding the gestational age (GI) of pregnant women as shown in table — 1, the data were approximate, being (58.33%) GA over 40 weeks and (41.67%) GI less than 40 weeks. It was also observed that (33.33%) presented hypertensive syndrome and (66.66%) post-dates. These data show that the incidence of misoprostol for labor induction was more evident in cases of gestation older than 40 weeks with post-dates. Aquino (2001) in his research shows the prevalence of misoprostol use for induction of normal delivery in cases of gestational

age greater than 40 weeks, was more evident, reaching a total (81.9%) of the total cases analyzed. Of this total, the cases of postdatism were also very evident, reaching (61.9%).

Table.2: Sociodemographic characteristics of parturients who used misoprostol to induce normal delivery at the Maternal Infant Hospital in the municipality of Gurupi — TO from March to August 2016.

Variable	N	%
Marital status		
Married	2	16,67
Stable union	0	0
Single	10	83,33
Total	12	100
Breed		
Black	1	8,33
Brown	11	91,67
White	0	0
Total	12	100,00

The sociodemographic characteristics of the patients (Table 2), It was observed that single pregnant women had higher rates with the use of Misoprostol, reaching (83.33%) and the prevalent occurrences are minimal (16.67%). Regarding the results obtained in this stage of the research, wherein most of these, the incidence of misoprostol use was higher in married pregnant women. According to Aquino (2001) reports in his study done in Campinas-SP that the prevalence of misoprostol use in married pregnant women, was much higher reaching (53.34%) against (46.66%) in single pregnant women.

Regarding race, table-2 shows that among the total of pregnant women who had a normal birth (91.67%) were brown. In relation to the race of the pregnant women analyzed, the brown color was predominant and the black color was also evidenced.

Although the use of misoprostol for labor induction was more evident in black and brown pregnant women, it should be noted that it should not be considered as a confirmatory hypothesis of this variable. For, some studies affirm this hypothesis and others that deny it.

Araújo et al. (1999) confirm this in their study where the frequency of cases reached higher incidences in the non-white race (black and brown) (64.2%) and lower incidence in the white race (35.8%). Araújo et al. (1999) confirm this in their study where the frequency of cases reached higher incidences in the non-white race (black and brown) (64.2%) and lower incidence in the white race (35.8%).

However, Aquino (2001) says that black women with 14.28%, browns with 17.14% and white with 68.57%

prevalence. Regarding the distribution of cases with characteristics of parturients who used misoprostol for cesarean section induction, the frequency of cases increased with age, with a higher incidence of cases in the age group above 20 years (71.43%), followed by the age below 20 years (28.57%) (Table-3).

Table.3: Characteristics of parturients who used misoprostol to induce cesarean section at the Maternal Infant Hospital in Gurupi — TO from March to August 2016.

Variable	N	%
Age		
>20	5	71,43
<20	2	28,57
Total	7	100
Gestational Age		
>40 Weeks	4	57,14
<40 Weeks	3	42,86
Total	7	100
Induction Indication		
Hypertensive Syndrome	3	42,86
Postdatism	4	57,14
Total	7	100

It was observed that there was a significant difference regarding this variable, showing that the need for cesarean delivery was much higher in pregnant women over 20 years of age.

Regarding the parameter "Gestational age," It was observed that pregnant women with gestational age greater than 40 weeks presented an index of (57.14%) against (42.86%) pregnant women with gestational age below 40 weeks.

It was also observed that (57.14%) presented postdatism and (42.86%) hypertensive syndromes. These data show that the incidence of misoprostol for labor induction was more evident in cases of gestation older than 40 weeks with postdatism.

These results show that pregnant women who were induced to use Misoprostol may have had complications during pregnancy that influenced the choice of cesarean section by the doctor, because currently it is now believed that the choice for normal birth is the best option for the newborn's future, so that the number of cesarean deliveries was so large in the group of pregnant women over the age of 20, GA greater than 40 weeks and an indication of induction by postdatism can be said that the prolongation of gestation time did interfere in the choice, but there are no reports in the literature that can disagree with such hypothesis.

Table-4 shows the sociodemographic characteristics of the patients who underwent cesarean with use misoprostol. The observed data show that single pregnant women had lower rates with misoprostol, reaching (28.57%), the married women had the same index, that is, (28.57%), while the pregnant women with stable union presented the equivalent value (42.87%).

Table.4: Sociodemographic characteristics of parturients who used misoprostol to induce cesarean section at the Maternal Infant Hospital in Gurupi - TO from March to August 2016.

Variable	N	%
Marital status		
Married	2	28,57
Stable union	3	42,86
Single	2	28,57
Total	7	100
Breed		
Black	0	-
Brown	6	85,71
White	1	14,29
Total	7	100

The data presented are in agreement with the study by Aquino (2011) in which he states that the cesarean section rate was much higher in married or stable union pregnant women than single pregnant women.

When comparing the variable “race”, it is observed that there is a remarkable predominance of brown pregnant women with an index of (85.71%), followed by white pregnant women with (14.29%), while black patients did not obtain significant values for the research (0%). However, there are no reports in the literature that agree or disagree with the results obtained.

Table.5: Regarding the characteristics of the parturients who used misoprostol to induce miscarriage, it was observed that (82.50%) of the pregnant women were over 20 years old

Variable	N	%
Age		
>20	33	82,50
<20	7	17,50
Total	40	100
Gestational Age		
>40 Weeks	3	7,50
<40 Weeks	37	92,50
Total	40	100
Induction Indication		
Hypertensive Syndrome	4	10,00
Postdatism	3	7,50
Others	33	82,50
Total	40	10

Matsubara (2010) in his study conducted in Paraná, reports that the abortion rate is more prevalent in the age group over 20 years (77.94%) and only (22.06%) of abortions performed in women under 20 years.

Diniz and Medeiros (2010) state that abortion grows according to the age of women, with a variation of (6%) for pregnant women under 20 years and (22%) of pregnant women aged 35 to 39 years, thus demonstrating that Abortion is a common act in the reproductive life of women and more than one fifth of Brazilian women have had abortion.

According to table-5, when the abortion index and the indication of induction were evaluated, it was observed that pregnancies with (IG) over 40 weeks had a lower index, making a total of (7.50%) against (92, 50%) of gestation with (GI) below 40 weeks.

Regarding this variable, the data presented were different when compared with cesarean section and normal delivery. This fact confirms that the risk of pregnant women having an abortion is more evident in the first weeks of pregnancy.

It is evident here that the abortion rate was more prevalent in pregnant women over the age of 20 years, gestational age less than 40 weeks and by several factors, such as anembryonic pregnancy, placental detachment, ectopic pregnancy, etc.

This confirms the study by Nader, Blandino and Maciel (2007), where the results of gestational ages below 40 weeks are as follows: 10 weeks (52.4%), 13 – 16 weeks (14.3%) and over 17 weeks (4.7%) of the total of 61 women in the municipality of Serra-ES.

Regarding the sociodemographic characteristics of the parturients (Table 6) who used misoprostol in abortion, it can be observed that among the pregnant women surveyed (77.50%) were single. According to the results, there is a higher incidence of miscarriage in single pregnant women.

Table.6: Sociodemographic characteristics of parturients who used misoprostol to induce spontaneous abortion at the Maternal Infant Hospital in Gurupi-TO from March to August 2016.

Variable	N	%
Marital status		
Married	3	7,50
União Estável	6	15,00
Stable union	31	77,50
Total	40	100
Breed		
Black	0	-
Brown	34	85,00
White	6	15,00
Total	40	100

This fact can be confirmed, according to studies by Souza et al. (2001), where he reports that (81.6%) of the parturients surveyed were single, (12%) married and (6.4%) had a stable union, suggesting that the vast majority of young women without a partner end up with a troubled pregnancy and this affects the fetus and leads to miscarriage. Because, among the many factors that can interfere with a pregnancy, the lack of family and partner support are the main cause. When compared to the variable “race”, it is observed that there is a remarkable predominance of brown pregnant women making up an index of (85.0%), followed by white pregnant women with (15.0%), while black patients did not obtain significant values for a survey (0%). However, there are no reports in the literature that agree or disagree with the results obtained.

IV. CONCLUSION

This study aimed to analyze the main reason for the use of misoprostol in labor induction at the Maternal Infant Hospital in Gurupi-TO during the study, it has been observed that the incidence of misoprostol use in induction of normal delivery has been steadily increasing. It has also been highlighted the use of it to promote complete expulsion in case of miscarriage or fetal death, thus, This research aimed to verify if this fact is also evidenced in the referred hospital because for this, a thorough search was performed in the medical records of pregnant women who attended the hospital during the months of the research. Thus, we looked for incidences of some variables, seeking the one that stood out and that could represent the reality of the hospital facing labor induction. Research data indicated that abortion is the most evident factor among the various cases that the hospital attends. Being its highest prevalence in cases of pregnant women aged over 20 years, with a gestational age below 40 weeks.

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