



OBSTETRICAL NURSES EVALUATION OF WATER BIRTHS

AVALIAÇÃO DE PARTOS ASSISTIDOS NA ÁGUA POR ENFERMEIRAS OBSTETRAS

EVALUACIÓN DE PARTOS ASISTIDOS EN EL AGUA POR ENFERMERAS OBSTETRAS

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ABSTRACT

Objective: to evaluate the indicators of water birth, assisted by obstetrical nurses and resident obstetrical nurses. **Method:** a quantitative, exploratory and descriptive, retrospective, of documentary analysis study, carried out in a Normal Delivery Center, composed of 18 childbirths assisted in the first year of implementation of a bathtub with warm water. The data were collected from a book of indicators for water birth. To organize data, we used the statistical program Statistical Package for the Social Sciences version 22.0, grouped in tables, submitted to descriptive and inferential numerical analysis, and based on the literature. **Results:** 2400 vaginal births were performed in NDC, 18 (0.7%) of them occurred in the water, in young women, with full-term pregnancy, primiparas (n=2), most of them in active stage of labor at the time of admission, under the assistance of obstetrical nurses and resident obstetrical nurses. **Conclusion:** there are many gaps in scientific evidence about water birth assistance. So, further studies are needed to strengthen such assistance, because it is a woman's right to decide where and how they want to give birth. **Descriptors:** Pregnancy; Obstetric Nursing; Nurse Midwives; Obstetric; Labor, Obstetric; Birth.

RESUMO

Objetivo: avaliar os indicadores do parto na água, assistido por enfermeiras obstetras e residentes de enfermagem obstétrica. **Método:** estudo quantitativo, exploratório e descritivo, retrospectivo, de análise documental, realizado em um Centro de Parto Normal, composto por 18 partos assistidos no primeiro ano da implementação de uma banheira com água morna. Os dados foram coletados de um livro de indicadores para parto na água. Para organização dos dados foi utilizado o programa estatístico *Statistical Package for the Social Sciences* versão 22.0, sendo estes agrupados em tabelas e submetidos à análise descritiva e numérica inferencial, bem como à luz da literatura. **Resultados:** de 2400 partos vaginais realizados no CPN, 18 (0,7%) ocorreram na água, em mulheres jovens, com gestação à termo, primíparas (n=12), maioria em fase ativa do trabalho de parto, no momento da internação, sob a assistência de enfermeiras obstétricas e residentes de Enfermagem Obstétrica. **Conclusão:** são muitas lacunas presentes nas evidências científicas acerca da assistência ao parto na água. Assim, mais estudos são necessários para fortalecer essa assistência por se tratar de um direito da mulher decidir onde e como deseja parir. **Descritores:** Gravidez; Enfermagem Obstétrica; Enfermeiras Obstétricas; Obstetrícia; Trabalho de Parto; Parto.

RESUMEN

Objetivo: evaluar los indicadores del parto en el agua, asistido por enfermeras obstetras, y residentes de enfermería obstétrica. **Método:** estudio cuantitativo, exploratorio y descriptivo, retrospectivo, de análisis documental, llevado a cabo en un Centro de Parto Normal, compuesto por 18 nacimientos asistidos en el primer año de implementación de una bañera con agua tibia. Los datos fueron recogidos de un libro de indicadores para parto en el agua. Para organizar los datos se utilizó el programa estadístico *Statistical Package for the Social Sciences* versión 22.0, agrupados en tablas, sometidos a análisis numérico descriptivo e inferencial, así como a la luz de la literatura. **Resultados:** de 2400 partos vaginales en CPN, 18 (0,7%) se produjeron en el agua, en mujeres jóvenes, con embarazo a término, primíparas (n=12), la mayoría en fase activa de trabajo de parto, en el momento de la admisión, bajo la asistencia de enfermeras obstétricas y residentes de enfermería Obstétrica. **Conclusión:** hay muchas lagunas en la evidencia científica sobre la asistencia del parto en el agua. Por lo tanto, se necesitan más estudios para fortalecer esa asistencia, porque es derecho de la mujer decidir dónde y cómo quiere dar a luz. **Descritores:** Embarazo; Enfermería Obstétrica; Enfermeras Obstétricas; Obstetrícia; Trabajo de Parto; Parto.

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INTRODUCTION

Immersion in water during labor and childbirth is an ancient practice. The first records were found in Cyprus where the goddess of love, Aphrodite, was born in Paphos beach.¹

The first water birth reported in the medical literature was conducted in a village in France in 1805 and was published in the journal *Annales de la Société de Médecine Practice of Montpellier*.²

During the 1960s, Michel Odent creates an obstetric design proposing no interference in the normal physiology of labor. The physical environment of the delivery rooms was changed to emulate home environment.³ The mothers had aspersion or immersion bath in tubs, so that, with the use of water, they could reduce the pain perception.¹

A systematic review published in the Cochrane Library, in 2012, analyzed 12 randomized clinical trials that evaluated the immersion in water, involving a total of 3,243 women⁴. The review pointed out that the immersion in water during the first stage of labor, reduces the perception of pain by the mother during labor and the expulsion period and consequently reduces the use of analgesia. It does not report adverse effects about the labor length, in the labor via and neonatal outcomes. However, this study brings few information about the outcome of the second stage of labor, i.e. more studies are necessary about birth itself⁴.

The current Brazilian literature broadly deals with the use of immersion in water during labor like a not pharmacological method for pain relief. However, publications about water birth are still restricted.⁵⁻⁶

After installing the first bathtub with warm water in the northeast in September 2015, in a Normal Delivery Center-NDC, it is necessary to evaluate assisted births indicators in its first year of implementation. Thus, investigating the healthcare context is a possibility to identify the frequency of deliveries assisted in water in an NDC and analyze maternal and neonatal outcomes of childbirth with this type of assistance.

The interest in the subject was driven by the experience as a resident obstetric nurse in the institution mentioned, assisting some women who gave birth in the water who reported satisfaction in giving birth to their children through this mode of delivery. In this way, we expect to be contributing to deepen the topic and provide to the professionals involved, an assessment of the work carried

out, making it possible to improve the quality of obstetric nursing care.

OBJECTIVES

- To evaluate the indicators of water birth assisted by obstetrical nurses and resident obstetrical nurses.
- To compare the percentage of water births with vaginal births out of water.
- To describe the profile of women who perform water births.
- To describe the maternal and neonatal outcomes of water births.

METHOD

This is a quantitative, exploratory, descriptive, retrospective, of document analysis study, carried out in a Normal Delivery Center, located in the city of Maracanaú, Ceará (CE), Brazil. This hospital was chosen because it was the first hospital to implement a bathtub with warm water for giving birth in the northeast of Brazil, in 2015.

This study deals with all the assisted deliveries in the first year of a warm water bathtub implementation, from September 2015 to August 2016, with a total of 18 deliveries. The sample corresponded to that population. The data collected corresponds to a book of indicators for water birth, created by the obstetrical nurses, from a structured instrument.

For data organizing, we used the statistical program Statistical Package for the Social Sciences version 22.0. The data were grouped in tables, submitted to descriptive and inferential numerical analysis and based on literature.

The research project was submitted and approved by the Research Ethics Committee of the UFC under the CAEE 1.572.021, as established by resolution No. 466/2012 of the National Health Council.

RESULTS

2400 vaginal births occurred in the Maracanaú Normal Delivery Center-NDC from September 2015 to August 2016, 18 (0.7%) of them occurred in the water.

Of all water births at the NDC in analysis, nearly half of the women (n=10) were from the city of Maracanaú, while some patients came from Fortaleza (n=04), Maranguape (n=02) and Pacatuba (n=02).

All the water births occurred in women with full-term pregnancy under 30 years old, mostly from 20 to 30 years old (n=13), and primiparas (n=12) according to Table 1.

Table 1. Obstetrical profile of women that had water births. Fortaleza (CE), Brazil, 2016.

Obstetrical profile	n	%
Gestational age		
37 - 42 weeks	18	100
Nº of pregnancies		
01	12	66,7
02	05	27,8
03	01	5,5
Nº Previous deliveries		
00	12	66,7
01	05	27,8
02	01	5,5

Among all the deliveries, (n=13) were assisted by resident obstetrical nurses with the supervision of obstetrical nurses.

During the patients' admission in the NDC, it was observed that seven were in the latent stage of labor, ten were in the active stage, and one in the expulsion stage as shown in Table 2.

Table 2. Stage of labor at the time of the mother's admission and when going into the bathtub. Fortaleza (CE), Brazil, 2016.

Stage of labor	n	%
Labor stage at the admission in NDC		
Latent	07	38,9
Active	10	55,6
Expulsion	01	5,5
Labor stage when going in the bathtub		
Active	16	88,9
Expulsion	02	11,1

The average length of total labor is 304.67 minutes, the average length of labor after the patients got in the bathtub is 63.44 minutes (95% CI-101 -16 minutes).

All the patients were accompanied during labor and at the time of delivery, and the accompanying person was allowed to get into the bathtub.

When relating the labor length after the mother got in the tub and the stage at which the woman was in that period, active labor stage average was 68.25 min, while the expulsion stage average was 30 min, 16 of them were in active labor stage when got in the bathtub, so (n=1) stayed in the tub up to 30 minutes, (n=9) from 30 minutes to 1 hour, and (n=6) from 1 to 2 hours. Only two were on the expulsion stage when got in the bathtub thereby (n=1) stayed in the water up to 30 min, (n=1) from 30 minutes to 1 hour.

All deliveries took place in the half-sitting position, without Kristeller maneuver or episiotomy, and it was not used synthetic oxytocin in any of the patients. Ten of the eighteen women practicing water births presented lacerations of first and second degree (n=06).

All the mothers expelled the placenta through active management, out of the water, and they were healthy.

During postpartum, no cases of puerperal hemorrhage were identified, and all of them had lochia. Just one immediate clamping of

This NDC doesn't have a protocol for water birth implementation, thus there is no defined criteria for the patients to use the bathtub.

In most cases, the bathtub is offered to women who have a very low pain threshold. Of all patients that used the bathtub, 16 were in the active stage of labor and two in the expulsion stage, according to Table 2.

the umbilical cord was carried out and, consequently, in that case, there was not skin-to-skin contact between the mother and the baby.

The immediate clamping was necessary in one case due to a fetal depression since the first minute Apgar score was less than seven although the fifth minute Apgar score was 8. In the other cases, skin-to-skin contact and appropriate clamp occurred. In relation to the first minute Apgar score, (n=1) was 5, (n=1) was 7, (n=6) was 8, and the clear majority (n=10/55.6%) was 9. The fifth minute Apgar score, was 8 (n=1), 9 (n=15) and 10 (n=2).

There were not identified problems about breastfeeding, or other complications with the newborns, so all the mothers and babies stay together, rooming-in.

Newborns showed an average weight of 3,250 g, cephalic perimeter of 34,4 cm, chest perimeter of 33,33 cm and height of 48,36 cm. In this way all babies born in the water have the weight, head circumference, thoracic perimeter and height appropriate for gestational age.

DISCUSSÃO

The reality found in a Health Supplement Sector of a maternity in Florianópolis, Santa Catarina (SC) is not the same found in this study. In the period from 2008 to 2012, 871 (19.5%) vaginal births occurred, 13.7% of them in the water. The practice of water birth

reached the highest percentage in 2012 (19.0%).⁷

A study in England, Scotland and Northern Ireland, in 2012, shows a much higher prevalence of water births than here in Brazil, reaching 58.3%.⁸

These data show that the NDC studied has a very low number of water births compared to other institutions. The causes of this low percentage may be the staff lack of knowledge and the consequent feeling of insecurity.

The rates found in the present study, match those found in another study of a maternity hospital of Santa Catarina, where most women subjected to water birth were primiparas (n=101/15%), and most of them (n=122/15.6%) were from 20 to 34 years old.⁷

A similar result was found in a research conducted in Switzerland.⁹ However, the results found in another study are different,¹⁰⁻¹¹ since most of the women who gave birth in the water were multiparous. Multiparous may choose having a water birth because of previous negative experiences.⁹ Women that want a water birth, look for comfort and avoid unwanted interventions.¹²

In this study, the obstetric and socio-demographic characteristics of the women who gave birth in the water were similar to another study conducted in a Normal Delivery Center where women gave birth out of the water. This result may occur due to the absence of a Protocol that indicates criteria to include or not women to practice water birth.¹³

Thus, the presence of the resident obstetrical nurse in the institution influences humanized obstetric practices based on scientific evidence.

These data confirm the study conducted in the State of Santa Catarina in the year 2016 when most of pregnant women in the period of admission was in the active stage of labor (n=94/64.38%).⁷

These are the ideal conditions for admission, since scientific evidence shows that early admission in the hospital is associated with longer labor and an increased use of oxytocin and analgesia.¹⁴ A study in the States United compared maternal and neonatal outcomes of 8,818 women admitted in the latent stage of labor with the admitted in the active stage, and showed an association between early hospitalization with the use of oxytocin, analgesia and intubation of neonates.¹⁵

In most cases, the bathtub is offered to women who have a very low pain threshold. When the patients got in the tub, 16 of them

were in the active stage of labor and two in the expulsion stage, as table 2.

According to seven clinic tests, the labor length is significantly lower in the group that performed a water birth, an average of 32.4 minutes, CI 95% -58.67 -6,13 minutes.⁴

According to a Cochrane systematic review, there were no differences in the perineal trauma incidence or severity.⁴

These data confirm the recent study carried out in the South of the country, during immediate postpartum, in which (96.50%) had no postpartum hemorrhage and (98.36%) there was no placental retention. When we observe the variables episiotomy and position during delivery, we realize that the women who gave birth in the water were not subject to the procedure of episiotomy according to the study.⁷

It is compatible with a study in Santa Catarina about 1st minute Apgar evaluation score, when 94.32% of newborns showed score greater than seven while in the 5th minute, 99.38% of newborns showed score greater than seven.⁷

In a study conducted in the South of the country we can find that 3.09% of water births ended up in the Intensive Care Unit, even though it's a small percentage, it contrasts with our study, maybe because of the size of the sample.⁷

The limitations of this study are related to the fact that data were collected retrospectively, thus, there was no record of some important variables. With the lack of some information, the study is susceptible to bias of data collection. It is also necessary to highlight that, as it was performed in only one hospital and with a reduced sample, it exists some constraints for the findings generalization.

Despite all these limitations, due to the limited number of Brazilian publications about water birth, this study has contributed to the knowledge of the subject.

CONCLUSION

In the maternity ward studied, even with a small quantity of water births and without the existence of a protocol to protect the indication and the professionals conduct, it is possible to observe that most women were young mothers, primiparas, in active stage of labor and had the opportunity to get in the water as a non-pharmacological method of pain relief, promoted by the obstetrical nurse on charge and resident obstetrical nurses.

The deliveries assisted were performed according to good care practices to labor and birth, with less interventions and minimizing

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practices such as episiotomy, use of synthetic oxytocin and Kristeller maneuver, as well as, the absence of severe lacerations and postpartum hemorrhage.

About good practices of neonate assistance, there was no correlation of low Apgar scores with water birth, favoring skin-to-skin contact and breastfeeding in the first hour of life.

However, there are many gaps in scientific evidence about water birth assistance. Thus, it is necessary to carry out further studies involving larger numbers of women and with a design that can highlight the direct correlation between the kind of childbirth and maternal and neonatal outcomes.

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