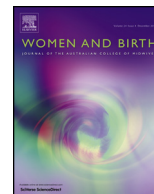




Contents lists available at ScienceDirect

Women and Birth

journal homepage: www.elsevier.com/locate/wombi



The Waterbirth Project: São Bernardo Hospital experience

Joyce C.S. Camargo^{a,b,*}, Vitor Varela^c, Fernanda M. Ferreira^d, Lucila Pougy^b,
Angela M. Ochiai^b, Maria Elisabete Santos^c, Maria Catarina L.R. Grande^e

^a Abel Salazar Institute of Biomedical Sciences of the University of Porto, Portugal

^b School of Arts, Sciences and Humanities of the University of São Paulo, Rua Arlindo Bétio, 1000 – Jardim Keralux, São Paulo, SP 03828-000, Brazil

^c São Bernardo Hospital – Setúbal, Rua Camilo Castelo Branco, 2910-445 Setúbal, Portugal

^d University of São Paulo, School of Nursing of University of São Paulo, Av. Dr. Enéas de Carvalho Aguiar, 419, 05403-000 São Paulo, SP, Brazil

^e Faculty of Psychology and Educational Sciences of the University of Porto, Rua Alfredo Allen, 4200-135 Porto, Portugal

ARTICLE INFO

Article history:

Received 29 June 2017

Received in revised form 17 November 2017

Accepted 11 December 2017

Available online xxx

Keywords:

Waterbirth

Maternal and neonatal outcomes

Second stage of labour

Midwifery

Aqua Apgar

Maternal-child nursing

ABSTRACT

Introduction: The following quantitative observational study aimed to analyse the maternal and neonatal outcomes of 90 low-risk pregnant women who gave birth in water at São Bernardo Hospital.

Methods: A form containing information on the obstetric history of the parturient, the type of immersion, and the labour and birth follow-up was used by midwives to collect the data.

Background: The Apgar score (at 1 min after birth) used in this study, called Aqua Apgar, was adapted by Cornelia Enning.

Results: The mean water immersion time was 1 h and 46 min and had an influence on the duration of labour (mean 5 h and 37 min), with a statistically significant difference ($P=0.004$). There was a decreased cervical dilatation time and a shorter duration of the expulsion phase. In the immersion scenario, 30% of the women did not undergo any examination to assess the length of the cervix, and 57.8% presented intact perineal areas or first-degree tears. As for neonatal outcomes, during maternal immersion, 97% maintained normal foetal heart rates (between 110 and 160 beats per minute) and Aqua Apgar was higher than 7, both in the first minute (mean of 9.4) and in the fifth minute of life (mean of 9.9).

Conclusion: These safety outcomes, based on sound scientific evidence, should increasingly support and inform clinical decisions and increase the number of waterbirths in health facilities. The results of this study align with growing evidence that suggests waterbirth is a safe delivery option and therefore should be offered to women.

© 2017 Australian College of Midwives. Published by Elsevier Ltd. All rights reserved.

Statement of significance

Problem

Is water delivery safe for the mother and the newborn?

What is already known

Evidence suggests associations between birth in water and positive outcomes for women and their infants. Nulliparous women who delivered in water were more likely to have a

normal birth compared to women who used a birth pool only during the first stage of labour.

What this paper adds

The Aqua Apgar score at one minute demonstrated an excellent neonatal outcome. The duration of immersion had an influence on the duration of labour, and none of the women or babies had significant adverse events.

1. Introduction

Birth in water or the expelling of the newborn (NB) into water during birth occurs in the complete immersion of the woman's abdomen into a receptacle, which may be a pool or a bathtub large enough for complete movement and change of position within the

* Corresponding author.

E-mail addresses: joyce@usp.br (J.C.S. Camargo), vitor.varela@chs.min-saude.pt (V. Varela), fernandamarcal@usp.br (F.M. Ferreira), lucila.pougy@usp.br (L. Pougy), angelaochiai@usp.br (A.M. Ochiai), elisabete.santos@chs.min-saude.pt (M.E. Santos), cgrande@fpce.up.pt (M.C.L.R. Grande).

<https://doi.org/10.1016/j.wombi.2017.12.008>

1871-5192/© 2017 Australian College of Midwives. Published by Elsevier Ltd. All rights reserved.

Please cite this article in press as: J.C.S. Camargo, et al., The Waterbirth Project: São Bernardo Hospital experience, Women Birth (2017), <https://doi.org/10.1016/j.wombi.2017.12.008>

water.¹ Therefore, the concept of childbirth in water is complete underwater baby immersion at the time of birth.²

The first report on waterbirth to be published in a medical journal dates back to 1805.^{3–5} Two other important landmarks in the history of waterbirth were reported in the 1960s and 1970s. In 1963, the story of Igor Charkovsky and his method of working with waterbirth was revealed,⁶ and Michel Odent⁵ presented the results of work done at the state-run hospital in Pithiviers with 100 births in water.⁵

A study in Australia analysed the public policy and guidelines of maternity wards on waterbirth⁷ and demonstrated that policies and clinical practise guidelines (CPGs) concerning birth in water were not consistent and offered subjective opinions. This appears to be the consequence of a lack of high-quality research concerning the practise, especially in relation to the inclusion and exclusion criteria concerning birthing in water. Women are often denied waterbirths based on little evidence and on views published in the current literature in favour of risk-focused obstetric and biomedical discursive practises. In particular, the evidence does not determine with certainty the risks of water immersion during labour and birth. The study also shows that CPGs are written with a hegemonic influence that impacts the autonomy of both women and practitioners.

However, some studies present two levels of reliable evidence indicating an association between waterbirth and positive outcomes for women and their NBs.^{8,9} A study conducted in the United Kingdom found that nulliparous women who delivered in water were more likely to have normal births compared to women who used a birth pool only in the first stage of labour.⁹

Waterbirth researchers emphasise that the relaxing effects of water may contribute to a reduction in the use of pharmacological methods for pain relief. They also suggest that immersion in water can shorten labour time, reduce blood pressure, increase maternal control over the labour environment, and result in less trauma to the perineum and fewer general interventions.^{1,10} The use of the birth pool was associated with spontaneous vaginal birth.⁸ Critics of this practise claim that there may be possible inhibitions of effective contractions and increased risk of mother and infant infection, perineal trauma, postpartum haemorrhage, water embolism, and NB trauma.^{1,10,11}

A literature review conducted in Australia¹² found no evidence to prove the risks of aspiration of water by the NB, infection, or thermoregulation of the mother or baby. Comparative studies did not find a difference between infants born in water or land births regarding water aspiration. Case studies identified very few NBs with symptoms of this type and none were able to establish a causal relation with waterbirth. The current evidence does not confirm the association of neonatal and maternal infection with waterbirth. Studies comparing women who gave birth in and out of water found a lower infection rate in those who gave birth in water or no differences. Other studies reported few incidences of neonatal and maternal infection due to childbirth in water and none attributed infections directly to the aquatic environment. In addition, comparative studies of neonatal and maternal temperature found few or no differences between those born in and out of water.¹²

The Royal College of Obstetricians and Gynaecologists (RCOG) and the Royal College of Midwives (RCM) developed a guideline booklet supporting waterbirth in healthy, low-risk pregnancies based on the best scientific evidence so that quality maternal care can be provided.¹³ In addition, the RCOG and RCM believe that in order to achieve best birth practises, organisations need to provide systems and structures that support this service.

Therefore, it is necessary to develop a service that is client/woman centred and can ensure that women are involved in planning their own care with information, counselling, and professional support.¹³

Due to the lack of research on the practise of childbirth in water and the absence of indicators of this practise in health care, the research question of this study was: is childbirth in water safe for both mother and newborn?

Thus, the intent of this study was to describe, characterise, and analyse the waterbirths conducted by the Waterbirth Project in the maternity ward at São Bernardo's Hospital in Setúbal, Portugal.

The maternal and neonatal outcomes observed in this study in relation to expelling the newborn into the water were the maternal immersion time, labour time, perineal trauma, placenta birth, the Apgar score (Aqua Apgar reported 1 min after birth), expulsion of the newborn into water, the baby being submerged in the water after birth, and the birth weight, among others.

It is important to highlight that the Aqua Apgar score is used to assess the vitality of the newborn in aquatic foetal expulsion and was adapted by the German midwife Cornelia Enning.¹⁴ The Aqua Apgar was used in this study since it was adopted in the Waterbirth Project at the São Bernardo Hospital. The Aqua Apgar was evaluated in the first minute, while the newborn was still submerged in the water, and in the fifth minute, when the NB was out of the water. This vitality was evaluated/observed according to the propositions in [Appendix A](#). At 5 min after birth, when the NB was out of the water, this study used the Apgar score devised by Virginia Apgar.¹⁵

2. Methods

This study was carried out using a transverse and observational quantitative approach. The research was conducted in the municipality of Setúbal at São Bernardo Hospital located at Portugal. Setúbal was the only municipality in Portugal to have the Waterbirth Project in a public hospital and be fully funded by the country's National Health Service.

The scope of this study was the waterbirths conducted by the Waterbirth Project that took place at the São Bernardo Hospital within the maternity ward. This hospital had waterbirth infrastructure featuring a specific birth room. The room was adjacent to an operating room and equipped with a sound system for playing music, air conditioning, a Birth Pool in a Box Eco birth pool with a disposable lining, and equipment specifically adapted for parturient waterbirth. The project commenced in 2006, with the preparation of the infrastructure, the definition of protocols, and technical-scientific training of the obstetric team.

At this hospital, there were 4257 deliveries during the Waterbirth Project's term, including caesarean sections and vaginal deliveries. Our study's sample comprised only women who participated spontaneously in the maternity ward's Waterbirth Project from a certain hospital. The women discovered the project through professionals at the hospital, from antenatal childbirth classes at the primary health care unit (the unit is in a regional hospital), via television or the Internet, or from other women who had experienced waterbirth at the hospital. Overall, 153 women arrived spontaneously and comprised our total sample study. Data were collected in April 2016 and refer to all deliveries that were part of the project, which ranged from 2011 to 2014. Of the 153 births, 90 occurred in water, comprising the sample of this study ([Fig. 1](#)). However, 63 women in this study did not have waterbirth due to mechanical and/or dynamic dystocia, changes in the birth plan (the couple's choice), and/or altered foetal well-being.

This project included pregnant women with a single foetus who were over 37 weeks pregnant whose pregnancy was monitored through prenatal care and classified as low risk, who decided to deliver in the water, and who were admitted to the hospital with a birth plan and were willing to have a waterbirth. Exclusion criteria included the following: the use of epidural analgesia or narcotic

Download English Version:

<https://daneshyari.com/en/article/10158854>

Download Persian Version:

<https://daneshyari.com/article/10158854>

[Daneshyari.com](https://daneshyari.com)