



WATER BIRTH: SAFE OR NOT?

Nursing

Dular S. K.

Research Scholar, Shree JTT University, Jhunjhunu (Rajasthan).
Associate Professor, Faculty of Nursing, SGT University, Gurugram

Shokeen Jyoti*

Lecturer, Faculty of Nursing, SGT University, Gurugram *Corresponding Author

ABSTRACT

Immersion in warm water is one of the methods for minimising delivery pain. Water birth is the procedure of giving birth in a tub of warm water. Some women choose to labor in the water and get out for delivery. Other women decide to stay in the water for the delivery as well. The theory behind water birth is that since the baby has already been in the amniotic fluid sac for nine months, birthing in a similar environment is gentler for the baby and less stressful for the mother. Water birth empowers the woman to be in charge of her own labour and decision making. It puts the birthing process back into the woman's power.

KEYWORDS

water birth, immersion, labor

INTRODUCTION

Water birth is a birth in which the mother spends the final stages of labour in a birthing pool or a tub of warm water which permits for a more relaxing, comfortable, and less complex delivery process. Also, the slow transition of the baby from the water environment in the mother's womb (amniotic sac) to the outside air environment after delivery "is a lot less drastic" as compared to a normal delivery.¹ Midwives, birthing centers, and a growing number of obstetricians consider that minimising the stress of labour and delivery will decrease foetal complications. The effect of buoyancy lessens a mother's body weight which permits for free movement. It also stimulates more efficient uterine contractions and improves blood circulation resulting in better oxygenation of the uterine muscles, less pain for the mother, and more oxygen for baby.^{2,3}

Immersion in water often helps reduce high blood pressure induced by anxiety. The water seems to decrease stress-related hormones, permitting the mother's body to produce endorphins which serve as pain-inhibitors. Contractions can feel shorter and less intense in the warm, soothing water.²

Whereas conventional labour delivery involves routine interventions which can be painful to mother, like episiotomy, and labour augmentation where medicine is given to increase the strength of contractions, in water birthing, water causes the perineum to become more elastic and relaxed, reducing the incidence and severity of tearing and the need for an episiotomy and stitches. The ability to assume different positions, the warmth of the water, dim lighting in the room and fewer people present, all contribute to a better birthing atmosphere.^{4,5,6}

INDIAN SCENARIO

Water births are still rare, some hospitals have skilled staff who have the experience of helping women labour and give birth in the pool. Others may have the facilities, but lack staff with the confidence to help you use them. Unfortunately, there's no guarantee that a hospital birth pool will be free for you when you need it. Hospitals providing water births are very less and most of these hospitals may have only one pool. Another mother-to-be may be using it, or it may need cleaning. Water birth is a comparatively recent and rare offering. The first water birth in India was reported in 2007. Water birth facilities are being adopted in different cities and becoming a slowly-growing trend. There is lack of consensus on the safety of water birth. Due to this, and lack of enough evidence to either support or discourage water birth, it is not recommended by most doctors in India. While childbirth and motherhood are commonly projected as the most gratifying experiences for a woman, scare-mongering, tales of excruciating labour pains and births gone wrong are often extensively told and re-told. Added to it is the "mechanical approach at hospitals" which is driving women to consider a more personalised and curated prenatal care and childbirth, turning the focus on concepts of natural and even home births.^{6,8}

A huge supply of clean water and trained birth supervisors are needed

for water birth which is still not available here. Also, there is hardly any awareness on water births.

The cost of water birth comes between Rs 80,000 and Rs 1.25 lakh and varies from centre to centre. It can be chosen by any couple but unfortunately, people being not so aware of it and lack of certain facilities are pushing it behind.

Positions to be assumed during labour underwater

- Squatting, holding onto the sides of the pool.
- Kneeling, leaning forwards onto the side of the pool
- Resting on side with head on a pillow on the side of the pool.
- Floating on back with hands grasping the sides of the pool and head supported on a pillow or using floats under arms.
- Floating on tummy with head turned sideways, supported on a pillow.
- If birth partner is in the pool, sitting, with back against him^{7,9}

Indications for safe water birth

- Gestational age above 37 weeks
- Singleton pregnancy
- Vertex presentation
- labour has started on its own
- waters broke before labour or during the first stage and amniotic fluid is clear.
- blood pressure in normal range
- baby is healthy and shows no signs of being in distress¹⁰

Contraindication:

- When the mother is having a BMI of more than 25, it is strenuous to make her get in and out of water.
- Medical conditions like heart disease or high blood pressure, it necessitates close monitoring. This is logistically tough underwater. In such cases water birth is best avoided.
- Foetal heart irregularity and meconium stained liquor require electronic foetal monitoring, which is again logistically difficult underwater.
- During the course of water labour, if at any stage, there is a perceived maternal or foetal distress, water should be abandoned and the mother should be brought out of water for land birth.
- A medical condition such as diabetes, heart disease, kidney disease or chronic mental illness
- pre-eclampsia (high blood pressure and protein in urine)
- Intra uterine growth retardation
- any bleeding in the last weeks of pregnancy
- Herpes sores
- previous caesarean section
- induced labour
- pethidine or a similar drug during labour^{7,11}

RISKS INVOLVED:

While there are several benefits of water birthing there are also certain risks.

- **Drowning of the baby due to water aspiration:** When the baby is deprived of oxygen at birth, it starts breathing prematurely underwater and then has a risk of aspiration.
- **Distress due to hot water:** The temperature of water should not be more than 38 degree centigrade, as the baby may suffer from distress if hotter than this.
- **Snapping of the umbilical cord:** The cord can snap at birth due to the pull of bringing the baby out of the water. It can be prevented by being gentle and aware, constantly checking and reducing the column of water just before birth.
- **Baby starting to breathe underwater:** Baby may inhale water if he is born in the birthing pool and starts breathing before he has been brought to the surface.
- **Greater risk of tearing:** Some doctors believe that the perineum is more likely to tear if a woman gives birth in water.
- **Infection:** There may be a risk of infection from the birthing pool itself, the outlet or inlet pipes, or if bowels open in the pool.
- **Lack of pain relief:** Some may find that being in the birthing pool does not make contractions any less painful. If plan was to spend most of labour in water, it could be very demoralising to have to get out so that you can have drugs, such as an epidural, for pain relief.
- **Emergency situations:** It may take time to get out of the pool if an emergency arises.^{12,13,14}

PROCEDURE:

A patient needs to understand the whole process and should be mentally be ready for it. Following steps should be considered:

- Few tests are performed to check if the mother is fit for a water birth and the foetus is healthy.
- Early contractions can last for many hours, and mother may have back ache, too. Warm water will soothe back, and help mother to relax. It will also help to store up energy for the hours ahead.
- When the mother is ready for birthing, the midwife/obstetrician patiently waits for her to labour at her own pace.
- When the mother is half dilated (at least 5 cm), she is immersed in deep warm water, making sure that she is comfortable in any position. The whole abdomen of the labouring woman should be submerged in water for maximum benefit. Recommended depth of tub is 31 inches and above.
- Continuously monitor foetal heart rate & maternal condition from time to time.
- It's really important to drink plenty of water while in the pool because it will be consumed in form of energy and sweating. Have a glass of water or juice close to the edge of the pool on a stool or small table in easy approach.
- Bladder needs to be kept empty during labour so that it doesn't take up space in pelvis and make it harder for baby to pass through.
- Check temperature, pulse and blood pressure regularly.
- Check the frequency of contractions. If they slow down, doctor may suggest a different position or getting up and out of the pool for a bit.
- Nurse sieves out any debris to keep the water clean.
- When the mother is fully dilated, she has an urge to push. As soon as the head is seen through the hand held mirror, she is encouraged to push. The care provider, patiently, with masterly inactivity, waits for the head to slowly emerge. She stays ready to help the mother, catch the baby gently underwater and lift it to the surface.
- Cut the cord only when it stops pulsating. The mother is then brought out of the water to remove the placenta in case it hasn't already been expelled and to examine and suture the perineum.
- Estimate blood loss after delivering the placenta.^{11,13}

Pain relief measures in pool

The calming effect of warm water in birthing pool will almost certainly help mothers to cope with painful contractions and backache. If still some extra help is required, following measures could be used:

- **Entonox(gas and air):** This is a mixture of nitrous oxide (laughing gas) and oxygen. It can be taken by breathing it in through a mouthpiece. It's only a mild pain-killer, but it should take the edge off contractions.
- **Massage:** Massage works well to ease the pain of contractions. Birth partner can massage the shoulders or lower part of mother's back while she is in the pool.
- The combination of warm water and massage can be powerfully relaxing.
- **Breathing:** Warm water helps to relax, and mother will probably find that breathing becomes calmer as she settle into the pool. The privacy of pool enables her to focus, undisturbed, on her

contractions.

- **Aromatherapy:** Some essential oils can be added to the water in the pool after consulting a qualified aromatherapist to find out the best and safest oils to use in labour.¹²

Pain relief measures to be avoided in pool:

Following forms of pain relief is not suitable for use in a pool:

- **TENS(Transcutaneous Electrical Nerve Stimulation)** is electrical and therefore not compatible with water.
- **Pethidine :** They may make mother very drowsy so she has to wait at least two hours after having it or until the drowsiness passes before she can get in the pool.
- **Epidurals :** They limit mobility. They would not therefore be safe for mother to have while immersed in water.¹⁵

Advantages

- Relaxation:** The relaxing effect of water will help to keep the contractions in rhythm so that they are less stressful for both mother & baby.
- Shorter labour:** The water helps muscles to relax, wastage of energy is less. All of the energy can be used to focus on contractions thus making labour quicker.
- Privacy and control:** Mother can labour undisturbed in the privacy of the pool.
- Buoyancy:** The water makes it easy for mother to move about.
- Coping with pain:** Being immersed in warm water may make contractions more bearable, just as having a bath helps ease tummy ache or backache. Mother is less likely to need pain relief drugs such as pethidine or an epidural to help her cope.
- Constant presence of a doctor:** Hospital protocols state that a doctor must be with mother all the time she is in the birthing pool.
- Natural labour:** There are less chances of medical intervention in labour. Also, it is likely to enjoy the sense of achievement of 'doing it all yourself'.
- Less risk of a tear:** Perineum may be less likely to tear because the water softens tissues so that they can stretch easily around baby's head making the birth of baby's head more gentle, and possibly reducing postnatal perineal pain.
- Better use of gravity:** It is likely to give birth in an upright position if birthing pool is used than on dry land. Being upright gives the advantage of working with gravity and may lead to a quicker, easier delivery.
- Peaceful birth for baby:** It's likely that baby will find birth less traumatic if he is born into an environment similar to the one he enjoyed in the womb. Emerging from the waters of the womb into the water of the birthing pool may make the transition to the outside world easier for baby.^{13,15}

CONCLUSION

Water birth empowers the woman to be in charge of her own labour and decision making. It puts the birthing process back into the woman's power. In India, the population is huge that the doctors do not have time to give individual attention to every patient. And water birth requires one doctor all the time with the patient during labour hours because it can stretch for long.

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