Water Immersion for Labor

Key Words: Hydrotherapy, Water Labor, Tub, Immersion

I. Purpose:
   A. To provide a noninterventionist method of promoting relaxation and pain management, minimizing the need for medical intervention, and recognizing four major concepts of water immersion during labor:
1. Relative weightlessness in water provides support, creating equal pressure on all body surfaces beneath the water, decreasing energy expended.

2. With relaxation, the woman may experience less pain and anxiety.

3. Promotion of optimal utero-placental perfusion produces more efficient contractions. Blood supply is also increased to the placenta, allowing for improved fetal oxygenation.

4. Mild vasodilatation, which occurs in water immersion, decreases maternal blood pressure slightly and increases maternal pulse slightly, which may result in increased oxygen to the uterus and fetus.

II. Policy:

This policy outlines inclusion criteria, eligibility requirements, contraindications, and equipment needed for water immersion during labor. It also outlines the care of the patient requesting water immersion during labor

III. Additional Competencies Required:

A. Unit based orientation.

IV. Specific Information:

A. Inclusion Criteria:

1. Water immersion for labor is limited to healthy patients with normal pregnancies as described in eligibility below and available on demand if a tub is available and the patient’s provider is in agreement.

2. Prior to the use of the labor tub, the patient:
   a. Reads the Water Immersion for Labor information document provided by the provider.
   b. Patient agrees to leave the tub at any time when requested to do so by the provider.
3. The following guidelines are utilized when caring for a patient who desires to utilize water immersion during labor. Delivery of the infant in water is not approved by this policy

B. Eligibility:

1. Singleton pregnancy
2. Cephalic fetal presentation
3. Gestational age $\geq 37.0$ weeks
4. Category I electronic fetal heart rate monitor tracing documented prior to water immersion.
5. Maternal vital signs are within normal limits.
6. No evidence of uterine tachysystole.
7. No contraindications to water immersion (listed below).
8. Patient desires water immersion and agrees to follow instructions from CNM, physicians, or nurse, including getting out of the water when asked to do so.
9. Eligibility for labor in water is also determined by progression of labor, availability of trained providers, availability of equipment, and number of patients requesting warm water immersion

C. Contraindications:

1. Gestation < 36.6 weeks by established dates
2. Multiple gestation
3. Previous Cesarean delivery
4. Maternal fever $>38.0$ C (100.4 F), or suspected infection, including but not limited to amnionitis.
5. Active genital herpes
6. Category II or III electronic fetal heart rate monitor tracing

7. Epidural or spinal anesthesia

8. Vaginal bleeding, subjectively assessed as greater than normal show

9. Any open or draining wound or other skin lesions

10. Untreated, communicable vaginal, blood, or skin infection (NOTE: GBS colonization is NOT a contraindication to hydrotherapy in labor)

11. Patients with communicable diseases (for example Human Immunodeficiency Virus (HIV), Hepatitis B Virus, etc).

12. Any condition requiring continuous electronic fetal heart rate monitoring.

13. Patients requiring AROM may use water immersion after a Category I electronic fetal tracing has been obtained following the procedure.

14. Patients with ruptured membranes may use water immersion under the following conditions:

   a. Amniotic fluid is clear

   b. If the amniotic fluid is meconium stained, water immersion in labor may be used. If the amniotic fluid is grossly contaminated by fetal fecal material (i.e. thick meconium) then in addition to the above guidelines, a 20 minute monitor strip must be obtained hourly.

15. Gestational Diabetics (all classes) and/or patients with suspected fetal macrosomia may use water immersion during the first stage of labor. The patient should be assisted out of the tub for the second stage of labor.
E. Care of the water immersion labor candidate includes the following:

1. Upon patient arrival to approved patient room:
   a. Nurse evaluates the patient upon presentation for possible labor in the usual fashion:
      i. Places the patient on the external fetal monitor
      ii. Measures and records maternal vital signs
      iii. Assesses the frequency & intensity of contractions
      iv. Assesses patient’s chief complaint
      v. Elicits patient history
   b. Provider assesses patient for stage of labor and fetal presentation.
   c. Provider and nurse assess patient’s eligibility for water immersion.
   d. Provider and nurse ensure patient has been provided the VUMC Water Immersion for Labor Information sheet and agrees to the terms.

2. During labor:
   a. Procedure for using the labor tub:
      i. Nurse sets the water temperature to 95-100 degree F using the temperature control knob on the outside of the tub.
      ii. Nurse closes the drain and begins filling the tub with water.
      iii. Nurse turns the water off and assists the patient to step into the tub via the side entry door once the water level is above the foot rests.
      iv. Nurse locks the side entry door panel of the tub back into place by rotating the locking knobs until the panel is securely shut and cannot be removed.
v. Nurse or provider assists the patient to adopt an optimal position in the tub.

vi. Nurse continues to fill the labor tub with warm water enough to cover patient’s abdomen.

vii. If the staff member filling the tub has to leave the room, the water is turned off to avoid overflow.

b. Nurse ensures that personal protective equipment (barriers meeting CDC universal precaution requirements) are available and utilized as needed. Staff with direct patient care who may be splashed wear a fluid impervious gown, shoulder length gloves, face shield, and mask.

c. Nurse and provider keep floor free from water to prevent slippage.

d. Nurse and provider ensure that the laboring patient is never left unattended in the tub. A reliable family member or staff attends the patient at all times while in the tub.

e. Nurse or provider removes floating organic material and discards according to hospital policy.

f. In case of heavily soiled water, patient is asked to exit the tub and the tub water is drained.

i. If the patient desires to reenter the tub, rinse the tub using the handheld spray nozzle and approved bleach wipes.

ii. Refill with clean water.

g. Patient may enter and leave tub whenever she wishes.

i. When using the labor tub, always drain the water level below the bottom of the door panel before unlocking and removing the door panel.
ii. Assist patient from the tub if she reports dizziness and assess vital signs.

h. Nurse and provider perform cervical exams as indicated. Ask patient to either raise buttocks out of the water for exam or to get out of the tub for the exam.

i. Nurse maintains water temperature between 35-38 degrees Celsius (95 – 100.4 degrees F) or woman’s comfort level, but not to exceed 38 degrees C (100.4 degrees F)
   i. Check and record water temperature hourly in the Electronic Medical Record (EMR).

j. Auscultate fetal heart rate (FHR) intermittently with waterproof Doppler per ACOG guidelines.
   i. If abnormal or suspicious fetal heart rate is auscultated, assist patient from the labor tub and place external fetal monitor.
   ii. If the FHR tracing is determined to meet Category I criteria, the patient can re-enter the tub.
   iii. When listening to the FHR, ask the patient to raise buttocks out of water.
   iv. If the patient is unable to raise buttocks, the nurse wears long gloves when applying the Doppler probe underwater.

k. Nurse monitors and documents vital signs as per routine labor, assessing maternal temperature every hour.
   i. Notify provider of increased temperature or pulse rate.
   ii. Assist patient from the tub for evaluation, if needed.

l. Nurse establishes IV access as clinically indicated.
   i. IV access is not mandatory.
   ii. Patient may enter the tub with a saline lock.
iii. If the patient has IV access, cover the access device with a non-porous material.

m. Nurse monitor fluid intake per unit policy.

n. Nurse administers pain medications as ordered.

3. Precipitous Birth of Infant in Water

a. Nurse or surgical tech set up delivery cart as usual for the birth.
   
   i. Add long gloves, gowns, and face/shields/mask to the delivery set-up
   
   ii. Turn on infant warmer.

b. Nurse or provider assists patient in adopting any position that is safe and comfortable.

c. Provider facilitates birth of the head by encouraging gentle pushing by the patient.

  i. Waiting until the next contraction is recommended before manipulation

  ii. If restitution and delivery of the shoulders does not happen after two contractions, the patient stands or gets out of the tub to finish the delivery.

  h. After delivery, the provider brings the infant promptly to the surface (within 10 to 20 seconds) watching for tension on the cord.
i. Nurse or provider perform Apgar assessment after the baby is lifted onto the patient’s chest.

   i. Assess infant carefully after one full minute.
   ii. It has been noted that water born babies do not breathe right away, but start slowly within the first minute.

j. Nurse and provider make certain that baby stays close to the mother or in the water to help maintain body temperature.

   i. Wait a full minute before institution of resuscitation measures if heart rate is normal and tone is adequate.
   ii. If infant does not establish respirations with gentle stimulation, the cord should be clamped and cut and infant taken to resuscitation area for standard neonatal resuscitation.

k. Water birth should be noted on the delivery records.

4. Cleaning of labor tub

   a. Drain water from tub using tub drain.

   b. Use a hospital approved bleach solution disinfectant to clean all surfaces of the tub.

   c. Pour several ounces of the bleach disinfectant on, around, and down the tub drain and wait 10 minutes.

   d. Rinse the tub clean with water. The hand-held tub nozzle may be used for this purpose.

   e. Wipe down the tub surfaces with a soft towel.
V. Nursing Implications:

A. Nursing care is provided according to the following unit guidelines:

1. Water Immersion for Labor

   1. Nursing Management of the Labor Patient

   2. Fetal Heart Rate Monitoring

VI. Patient/Family Education:

A. Educate patient/family at the level of their understanding of the following:

   1. Plan of care, including the benefits of water immersion use during labor and birth.


VII. Documentation:

A. Documentation is done according to hospital and unit guidelines and occurs in the following places:

   1. Nurses document their assessments in the electronic documentation system, including the hourly tub water temperature.

   2. Nurses document the use of water immersion for labor on the Labor and Delivery Summary.

   3. Providers document their assessments in the OB EMR.

VIII. Safety:

   

   f. Abrasives should never be used to clean the tub. The use of abrasives may cause damage to the tub.
A. Assist patient in and out of tub.

B. Use only the underwater Doppler while the patient’s abdomen is submerged, to avoid risk of electric shock from other devices.

C. Promptly remove any spilled water from the floor surface, using towels or bath blankets.

IX. References:


Waterbirth International  http://www.waterbirth.org/mc/page.do


Area Specific Policy Manual: Labor and Delivery
AS 201111-20.01  Fetal Heart Rate Monitoring

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