

WATER BIRTH, THE MODIFIED NATURAL CHILD BIRTH

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ABSTRACT

Abstract – Even though the increasing of Caesarean section rate found in many countries, promotion of natural childbirth remains worldwide. The pure natural childbirth in natural position was modified step by step. It became modern vaginal delivery in lithotomy position with active management and many supporting medications. Pain is the main concern of pregnant women during childbirth. Many modalities are introduced for pain relief, with or without medication, mechanical or electrical, or regional anesthesia. Warm water in the bathtub is one of the simple options for pain relief. The temperature of 37°C made the pregnant woman feels relax and calm by the relaxation of the muscles. The buoyant force reduces the gravity and has less pressure effect on the weight bearing area. Finally, due to comfortable in the bathtub, many pregnant women prefer to remain there for pushing, resulting in water birth. The use of medications during intrapartum period is reduced. Manipulations such as episiotomy are also difficult to perform. The overview of water birth is the mimicry of the pure natural childbirth except the bathtub. However, the positive effect of pain relief needs to be aware of the complications such as infection or near drowned baby and tired mother.

Keywords—*natural birth, pain, water birth.*

INTRODUCTION

Even though the International Healthcare Community had considered the ideal rate of Caesarean section to be between 10-15% since 1985, the Caesarean section rate is increasing worldwide every year. It is as high as 40.5% of all birth in Latin America and Caribbean countries and 32.3% of childbirth in North America. The average annual increase around the world is 4.4% in the past 15 years. Many organizations have tried to reduce these rate by promoting conventional vaginal delivery and active management. Natural childbirth is one of conventional vaginal delivery and water birth is the modified natural childbirth.

ACTIVE MANAGEMENT OF LABOR

Conventional vaginal delivery can be conducted by caregiver, obstetrician or midwife. The place of birth can be at the hospital, at birth unit, or at home. In the past, labor was usually prolonged and progressed naturally which it caused several complications in both maternal and baby. Prolong labor also caused increasing operative delivery such as forceps extraction or Caesarean section followed by maternal and neonatal morbidity, too.

The active management was introduced by Kieran O'Driscoll in 1969 in order to reduce such complications of prolonged labor. Augmentation and stimulation protocols were used as management tools. Amniotomy followed by oxytocin infusion reduced labor time from over 12 hours to less than 12 hours. The result showed the morbidity of labor was less in the intervention group. Nowadays, the active management is accepted as a standard protocol for labor in many countries.

Pregnant woman will be presented with definite criteria of labor. She will be admitted to the Labor Unit. History taking and physical examination will be done along with some laboratory tests. Enema and pubic hair shaving may be done there prior to go to the first stage unit.

In the first stage of labor, amniotomy will be performed in case of intact membrane. The benefit is not only augmentation of labor but also evaluation of the amniotic fluid. Intravenous line and fluid will be administered with additional of oxytocin. Pregnant woman will not allowed to eat or drink anything to prevent complications, such as aspiration during anesthesia, in case of emergency Caesarean section be needed. She will be allowed ambulation as going to the toilet but with limitation because of IV line and IV fluid bottle. Continuous electronic fetal monitoring may be used in some labor units. Pain will be managed by medications such as Pethidine or Morphine injection that caused possible neonatal complication, respiratory depression. Spinal or Epidural anesthesia may be used in the facilities with available anesthesiologist. Frequent pelvic examination will be done to access the progress of labor and cervical dilatation. She will stay there until full dilation of cervix then move on for labor.

In the second stage of labor, she will be in lithotomy position. Local anesthesia such as xylocaine will be infiltrated at the perineum. Episiotomy will be performed during crowning. After external rotation, the baby's noses and mouth will be sucked by suction bulb. Shoulder will be delivered. Immediately after birth, the newborn's umbilical cord will be clamped and cut then the baby will be transferred to its mother for breast feeding.

NATURAL CHILD BIRTH

Natural childbirth is the birth process without intervention or medication. The labor starts naturally without induction. Bowel preparation such as enema is not needed. It is not necessary to shave pubic hair. The progress of labor is going on without augmentation by exogenous oxytocin. Intravenous fluid is not needed. Pregnant woman in labor can move freely in the first stage area. She is allowed to sip water but no food is allowed. Routine and frequent pelvic examination is not necessary. Continuous electronic fetal monitoring is not needed. The observation with occasional fetal heart sound check by stethoscope is adequate.

Pain management in natural childbirth is different form active management of labor. Many modalities are used but without medication. Massage, acupuncture, Transcutaneous Electrical Nerve Stimulation (TENS), hot compression or warm water tub are used. Efficacy depends on each trial.

When pregnant woman feels like to push, pelvic examination may be done at this time to confirm the full dilatation of the cervix. She can move or choose her comfortable position. She does not need to remain on the bed in lithotomy position as conventional method. Lithotomy position may cause pressure to the sacrum and coccyx with more pain and uncomfortable by limitation of pelvic expansion. During labor, baby needs enlarging of birth canals to come out. Lying position presses the birth canal by the weight of the mother. The most acceptable position to open the pelvic outlet is the squat position. Knee abduction will open the pelvic outlet without posterior pressure on sacrum and coccyx. The angulation of coccyx can be extended more. By gravity, the baby is easy to come out.

If the baby's head reaches the pelvic outlet as we called "crowning", the mother will be asked to push slowly with contraction. Episiotomy is not needed. Perineum will be slowly extended and may be torn on the weak point. The obstetrician or midwife will do the Ritgen's maneuver at this moment to prevent extensive tear of the perineum.

The amniotic fluid will be cleared from the baby's nose and mouth by gentle sweeping after external rotation. There is no need to suck the fluid with the suction ball. The baby's head will be pulled for shoulder delivery. The umbilical cord needs to be cut, but not immediately after birth. The baby will be on its mother's abdomen to start their bonding. Breast feeding will be started in the labor room to promote milk production.

WATER BIRTH

Water birth is recently popular in Asia and UK. 9% of babies born in the UK are from this under water technique. It is the subset of natural childbirth. It is modified from the conventional natural childbirth at the point of pain control in the first stage of labor. Warm water at 37°C in the bathtub is one of pain relief options. When the pregnant woman cannot bear the pain, she may go into the bathtub. The effect of warm water in the bathtub is soothing and supporting the pregnant woman, combining with buoyancy effect to reduce pressure on the body. The warm temperature relaxes the muscle, reduces tension and eases pain. It makes her relax and calm.

At the point of pushing, some pregnant women get up for land-birth, but some prefer remaining in the bathtub for labor. The caregiver stays beside the bathtub using long gloves for assisting. No intervention is needed at this point. The mother controls the rhythm of pushing with contraction. The birth process is going on by natural mechanism of labor. Episiotomy cannot be performed under the water. The baby remains in the warm water, as same temperature as intrauterine amniotic fluid, immediately after birth. The first gasping is not occur unless it touch the air, so the risk of aspiration is low. The baby is then carried out of the water followed by cutting its umbilical cord.

Since the process of placental delivery in the third stage of labor causes a lot of blood lose, the mother needs to step out of the bathtub for placental delivery and further management.

The water birth is associated with high maternal satisfaction due to pain relief, good experience of childbirth and the increased likelihood of intact perineum. It is also associated with decreased incidence of episiotomy, severe perineal laceration and reduced postpartum hemorrhage.

COMPLICATION

Meta-analysis and reviews found no significant difference in complication between water birth and conventional vaginal delivery in terms of bleeding, infection and perineal tear. On the baby's side, there is no significant difference between babies delivered in water and on land in terms of neonatal mortality, neonatal intensive care unit or special care unit admission rate, Apgar scores, umbilical cord blood gases and pH, and infection rates. Neonatal mortality rates are also low and similar. However, the careful selection of the population of low risk pregnancy to conduct water birth may be the factor of low complication.

The water birth may cause possible complications such as fresh water drowning, respiratory problems, neonatal hyponatremia, neonatal waterborne infectious disease, cord rupture with neonatal hemorrhage, hypoxic ischemic encephalopathy and death. These potential complications may not be seen in land-based birth. The rates of these complications are likely to be low but they are not well defined.

CONCLUSION

The target of all methods of child-bearing are safety in both mother and baby. Caregivers need to have precise knowledge and careful counseling to the pregnant woman in all alternatives and risks of complications. If she prefers to have water birth, she should be advised of the potential detrimental consequences for the baby, extra from the land-based delivery. The final decision is, of course, the agreement of both sides based on the clinical situation, place of delivery and the experience of caregiver. However, emergency Caesarean section

or other operative delivery needs to be aware in all circumstances. Pediatrician also needs to be informed for awareness of neonatal complications.

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