

Study of Complications of Occiput Posterior Position And Its Management



Medical Science

KEYWORDS :

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ABSTRACT

28 years old primi at 39 weeks of gestation presented to labour. On admission she had regular painful contractions for the past 10 hours. Her cervix was 1cm dilated 50% effaced and fetus was at -3 stations with intact membranes. On examination fetal back was difficult to palpate consistent with an OP position. After admission she was confined to bed rest and placed on continuous fetal and uterine monitoring. Within 4 hours membranes ruptured spontaneously with clear fluid. The fetus was at -2 station and her cervix dilated to 4 centimeters with 80% effacement. In spite of 8 hours of admission and 4 hours of oxytocin administration cervical dilatation did not progress beyond 7 centimeters and no fetal descent occurs. Caesarean section was recommended for failure to progress. A healthy baby boy weighing 3.5 kgs who was noted to be in direct OP position was born with Apgar scores of 9/9.

Introduction

As a part of clinical study of effective management of occiput posterior position with obstructed labour the research scholar has carried out this following work. At first it is necessary to understand the occiput posterior position which is explained in the following lines.

Occiput posterior position

Occiput posterior is the most common abnormal fetal position.¹ The prevalence of OP position in term, vertex, singleton labors has been shown to range from 10% to 25% during the early stage of labor and 10% to 15% during the active phase, and is more common in nulliparas than multiparas.² OP positions at birth occur approximately 5% of the time, and may result from malrotation of an original occiput anterior (OA) position or a persistent OP that has failed to rotate anteriorly.³ The OP position is associated with a higher rate of complications during labor and birth, including prolonged labor, dystocia, chorioamnionitis, third and fourth degree lacerations, operative vaginal delivery, and cesarean section.² Women who are in labor with a fetus in an OP position use epidural analgesia for pain management more frequently than women whose fetuses rotate to OA during the course of labor. The rate of spontaneous vaginal delivery may be as low as 26% for nulliparous women and 57% for multiparous women with persistent OP fetuses.²

Complications associated with persistent occiput posterior position

The complications associated with persistent OP position can be attributed to relative cephalopelvic disproportion.¹ Contractions will be less efficient and first stage will take longer because the vertex in an OP position is a less effective dilating wedge than when it is in the OA position. As the woman nears full dilatation, persistent anterior lip, cervical edema, and rarely cervical lacerations may occur as the force of the contractions is exerted anteriorly on the portion of cervix trapped between the fetal head and the symphysis pubis.⁵ If the occiput remains in the direct OP position, the anterior-posterior diameter of the OP fetal vertex that presents in the pelvic outlet is greater than the anterior-posterior diameter that presents when the fetus is in the OA position. If flexion of the head is inadequate, an even greater presenting anterior-posterior diameter will result.¹ This disproportion results in a greater risk of vaginal and perineal lacerations and operative birth.² Longer labors associated with OP position can cause fatigue of the uterine muscle and predispose the woman to a postpartum hemorrhage.² Furthermore, a long and painful labor can rob the woman of much joy and excitement in childbirth.

Ponkey et al.² compared the outcomes of 360 women whose fetus was in an OP position just prior to birth to the outcomes

of 6094 women whose fetus was in an OA position just prior to birth. There were no differences between the groups with regard to demographic characteristics, parity, weight, or body mass index. The women with a fetus in OP position had a higher incidence of labor 12 hours (49.7% vs. 26.2%; P .001), assisted vaginal delivery (24.6% vs. 9.4%), cesarean section (37.7% vs. 6.6%), and third or fourth degree lacerations (18.2% vs. 6.7%; P .001).²

Persistent OP position can cause complications in the neonate as well. Cheng et al.⁶ compared the outcomes of 31,392 women who were at term and had cephalic singleton births. They found that women with infants born in OP position had higher risks for 5-minute Apgar score <7 (adjusted odds ratio [OR] 1.50, 95% confidence interval [CI] 1.17-1.91), acidemic cord gases (OR 2.05, 95% CI 1.52-2.77), meconium-stained amniotic fluid (OR 1.29, 95% CI 1.17-1.42), birth trauma (OR 1.77, 95% CI 1.22-2.57), admission to the neonatal intensive care unit (OR 1.57, 95% CI 1.28-1.92), and longer stay in the hospital (OR 2.69, 95% CI 2.22-3.25). The authors hypothesize that these results are most likely caused by longer labors because of the relative cephalopelvic disproportion with an OP fetus, or higher rates of chorioamnionitis, a "downstream effect" observed in women with OP fetuses.⁶ Given the fact that women with OP fetuses experience longer labors and higher rates of interventions including operative delivery, it is not surprising that their neonates would suffer adverse outcomes as well.

Management of Occiput posterior position in Labour

Management of OP position should be expectant and foster the goal of spontaneous vaginal delivery, preferably with anterior rotation. To facilitate rotation of the fetal head, active participation of the mother with position changes during the first and second stages is necessary. In the event these actions fail, assisted vaginal delivery or cesarean section may be required.

If the membranes are intact, try to preserve them as long as possible. Loss of amniotic fluid reduces the fetus's buoyancy, making rotation more difficult. The fluid also serves as a cushion and without it, the woman's perception of contraction pain may intensify to the point that she cannot cope.⁵

Spontaneous vaginal delivery without rotation can be anticipated in approximately 40% of persistent OP positions, if the pelvic outlet is roomy and/or the woman is multiparous.¹ However, a reduced pelvic outlet capacity and/or strong, resistant vaginal muscles may cause prolonged late first stage and/or second stage.¹ Manual rotation can be attempted when full dilatation has been reached if rotation secondary to position change has failed. While studies on manual rotation are limited, a recent retrospective cohort study looked at all women who

had an attempt of manual rotation from OP or OT position at the University of California at San Francisco between the years 1976 and 2001. Seventy-four percent (n 549/742) of the women had a successful manual rotation and delivered vaginally in the OA position.⁷ The analysis found that women 35 years of age and those who were multiparous were more likely to experience successful manual rotation. Factors associated with cesarean delivery after attempted manual rotation included nulliparity, 35 years of age, induction of labor, and epidural analgesia. Of women who had a successful manual rotation, only 2.1% birthed by cesarean section.⁷ Before attempting manual rotation, the posterior ear is first located to confirm the position. It is prudent to wait a few moments for spontaneous rotation of the occiput, which occasionally happens as a result of this first step.¹ If no rotation occurs, the head is grasped with the fingers over one ear and the thumb over the other and rotation is attempted with the next contraction.¹ Although epidural analgesia may provide excellent pain control, it also causes diminished abdominal muscular tone and relaxes the levator muscles of the pelvic floor, predisposing the fetus to incomplete rotation.⁸ The use of epidural analgesia has been associated with a higher rate of persistent OP position and may actually increase the occurrence of OP at birth, contributing to higher rates of assisted vaginal birth and cesarean section.⁸ In the developed world, cesarean section is most often the appropriate action for true labor dystocia secondary to failure of fetal rotation, especially in the presence of an abnormal fetal heart pattern.⁹ The World Health Organization created a set of guidelines specifically for use in the developing world, where the rate of maternal morbidity is much higher. These guidelines state that assisted vaginal delivery by vacuum or forceps is indicated when labor arrests at full dilatation and the leading bony edge of the fetal head is at 0 station.⁹ If the leading bony edge of the head is between 0 station and -2 station, the guidelines call for delivery by vacuum extraction with symphysiotomy.⁹ Symphysiotomy is an arguably more extreme measure than cesarean section, and therefore not an option in places with access to safe cesarean birth. The risks of the procedure include urethral and bladder injury, infection, pain, and long-term difficulty walking.⁹ However, in parts of the developing world, there may

be limited options for care. Globally, obstructed labor, which may be caused by fetal malpresentation, malposition, or pelvic deformity, accounts for approximately 8% of maternal deaths.⁹ This statistic is most likely an understatement, because deaths from complications of obstructed labor are counted separately. Complications can include uterine rupture, infection, and postpartum hemorrhage.⁹

Conclusion

Clearly, management of OP position is clinically challenging, even for the most experienced obstetricians. Discussion with a woman who has a previous history of OP position in labor may be helpful during prenatal care. The obstetricians can teach the woman how to recognize the position of her fetus and postures to maintain during pregnancy to prevent the development of OP; studies have not shown that these positions correct an OP position, but they may have some effect in preventing an OP position. She should also be taught symptoms of OP in early labor and techniques she can use before coming to the hospital or birth center to encourage rotation. Once she is in your care, management of a woman with an OP fetus should support physical activity throughout labor. Resist the urge to perform artificial rupture of membranes. But in cases of suspected cephalopelvic disproportion, labor dystocia, or extremely slow progress, always rule out OP position and try to correct it before moving on to other measures.

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