



Effects of Pushing Techniques in Birth on Mother and Fetus: A Randomized Study

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Abstract:

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Background: *The Valsalva pushing technique is used routinely in the second stage of labor in many countries, and it is accepted as standard obstetric management in Turkey. The purpose of this study was to determine the effects of pushing techniques on mother and fetus in birth in this setting. Methods:* This randomized study was conducted between July 2003 and June 2004 in Bakirkoy Maternity and Children's Teaching Hospital in Istanbul, Turkey. One hundred low-risk primiparas between 38 and 42 weeks' gestation, who expected a spontaneous vaginal delivery, were randomized to either a spontaneous pushing group or a Valsalva-type pushing group. Spontaneous pushing women were informed during the first stage of labor about spontaneous pushing technique (open glottis pushing while breathing out) and were supported in pushing spontaneously in the second stage of labor. Similarly, Valsalva pushing women were informed during the first stage of labor about the Valsalva pushing technique (closed glottis pushing while holding their breath) and were supported in using Valsalva pushing in the second stage of labor. Perineal tears, postpartum hemorrhage, and hemoglobin levels were evaluated in mothers; and umbilical artery pH, Po_2 (mmHg), and Pco_2 (mmHg) levels and Apgar scores at 1 and 5 minutes were evaluated in newborns in both groups. **Results:** No significant differences were found between the two groups in their demographics, incidence of nonreassuring fetal surveillance patterns, or use of oxytocin. The second stage of labor and duration of the expulsion phase were significantly longer with Valsalva-type pushing. Differences in the incidence of episiotomy, perineal tears, or postpartum hemorrhage were not significant between the groups. The baby fared better with spontaneous pushing, with higher 1- and 5-minute Apgar scores, and higher umbilical cord pH and Po_2 levels. After the birth, women expressed greater satisfaction with spontaneous pushing. **Conclusions:** Educating women about the spontaneous pushing technique in the first stage of labor and providing support for spontaneous pushing in the second stage result in a shorter second stage without interventions and in improved newborn outcomes. Women also stated that they pushed more effectively with the spontaneous pushing technique. (BIRTH 35:1 March 2008)

Keywords: second stage of labor; pushing techniques; spontaneous pushing; Valsalva-type pushing; experience of birth

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