Misoprostol *for*
POSTPARTUM HEMORRHAGE

Blood loss after vaginal delivery: What do objective measurements tell us about postpartum hemorrhage?

The quantity of postpartum bleeding in the published medical literature is widely variable. In part, this variability may be caused by the use of visual estimation rather than objective measurement of blood loss. Gynuity Health Projects conducted large-scale trials in nine hospitals in Burkina Faso, Ecuador, Egypt, Turkey, and Vietnam to evaluate the effectiveness of misoprostol for postpartum hemorrhage (PPH). As part of this study, blood loss after vaginal delivery was collected and measured systematically for over 40,000 deliveries using a calibrated bed sheet for one hour postpartum or until active bleeding ceased. Initial hemoglobin levels were also measured for all women who were screened in the study and in addition, postpartum hemoglobin was measured for women treated for PPH. Providers were trained to use two new technologies—the HemoCue AB® apparatus and the BRASSS-V drape®—for assessing pre- and post-delivery hemoglobin levels and measuring postpartum blood loss, respectively.

Blood loss was recorded in two distinct clinical settings—where prophylactic oxytocin was routinely administered during the third stage of labor and where the routine administration of prophylactic oxytocin was not practiced. The average pre-delivery hemoglobin (Hb) level for all women was 11.5 g/dL ± 1.4. Total postpartum blood loss ranged from 10 to 3500 ml. On average, postpartum blood loss was higher among women who did not receive oxytocin prophylaxis in the third stage of labor (290 ml ± 281), compared with an average blood loss of 256 ml (±165) among women receiving oxytocin prophylactically. The rate of treated PPH cases was significantly higher in hospitals that did not routinely administer oxytocin prophylactically (10.5%) compared to hospitals where women were systematically given prophylactic oxytocin (2.6%). Seventy-five percent of PPH cases were diagnosed using the calibrated drape with an average blood loss of 712 ml ± 113 at the time of PPH diagnosis. The total blood loss for treated PPH cases was 989 ml ± 279 and the mean drop in postpartum Hb was 1.9g/dL ± 1.6.

The data validate the expected finding that in hospitals where oxytocin is systematically given during the third stage of labor, women bleed less after delivery. In addition, the findings indicated that almost all women who were diagnosed with PPH lost 700 ml of blood or more, before treatment. Many of these women showed no clinical signs of distress, even at these elevated levels of blood loss. In fact, nearly 1,500 women whose blood loss exceeded 500 ml and were never treated for PPH showed no noted adverse events. These findings demonstrate that women are able to tolerate blood loss greater than 500 ml after delivery. It also raises the question of whether the current definition of PPH (blood loss > 500 ml) is clinically relevant and/or the best standard for public health interventions.

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