Effect of preterm birth and antenatal corticosteroid treatment on lactogenesis II in women.

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OBJECTIVE: The onset of copious milk secretion after birth is known as lactogenesis II. The objective of this study was to investigate the effect of preterm birth and antenatal corticosteroids on the timing of lactogenesis II after birth. METHODS: Women who had received antenatal betamethasone treatment and were expressing for a preterm infant whose gestational age was <34 weeks (N = 50) were included. On days 1 to 10 postpartum, participants measured the volume of milk expressed in 24-hour periods and collected milk samples. Lactose and citrate levels were analyzed in the milk. RESULTS: The gestational age at delivery was 31 weeks (range: 24.2-33.7). Milk volume was recorded by 46 women on 320 expression days and was positively associated with gestational age. Gestational age modified the effect of interval between betamethasone administration and delivery on milk volume. At gestational age 28 to 34 weeks, women who delivered 0 to 2 days after betamethasone treatment obtained significantly greater volumes than women who delivered 3 to 9 days after treatment. Milk samples (N = 324) were collected by 42 mothers. Mean +/- SD lactose and citrate levels were 156.800 +/- 36.217 and 3.458 +/- 1.442 mM, respectively. There was a significant positive effect of gestational age on milk lactose levels but not citrate levels. Betamethasone treatment did not alter lactose or citrate levels in milk. CONCLUSIONS: Delivery at extremely preterm gestational ages caused a significant delay in the onset of lactogenesis II. The volume of milk was reduced further when antenatal corticosteroids were administered between 28 and 34 weeks' gestation and delivery occurred 3 to 9 days later. In view of the advantages of mothers' own milk, additional support with lactation is recommended for mothers of preterm infants, particularly those who have been treated with corticosteroids before the delivery.

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Related Links

- Initiation of lactation in women after preterm delivery. [Acta Obstet Gynecol Scand. 2002]
- Single versus weekly courses of antenatal corticosteroids in preterm premature rupture of membranes. [Obstet Gynecol. 2004]
- Metoclopramide effect on breastfeeding the preterm infant: a randomized trial. [Obstet Gynecol. 2005]
- Peak bone mass after exposure to antenatal betamethasone and prematurity: follow-up of a randomized controlled trial. [J Bone Miner Res. 2006]
- Prepregnant overweight and obesity diminish the prolactin response to suckling in the first week postpartum. [Pediatrics. 2004]