

Early Difference in the Endocrine Profile of Long and Short Lactational Amenorrhea

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Abstract

The endocrine profiles associated with long and short lactational amenorrhea were assessed in a longitudinal study in which morning blood samples were drawn in 48 women from the first postpartum month until the recovery of ovulation and in a cross-sectional study in which the samples were drawn throughout 24 h at the end of the third postpartum month in 10 fully nursing and amenorrheic women. PRL, LH, FSH, estradiol (E₂), progesterone, cortisol, and dehydroepiandrosterone sulfate were measured.

In both studies we detected a smaller PRL increase in response to suckling ($P < 0.001$) and higher E₂ levels ($P < 0.001$) in nursing women who ovulated within 6 months postpartum compared to those in women who did not. Such differences were observed early after delivery when all women were fully nursing and amenorrheic.

These results suggest some probable sources of variability in the duration of lactational amenorrhea in our population. The greater PRL response to suckling associated with longer amenorrhea may be due to higher sensitivity of the breast-hypothalamus-pituitary system or a stronger suckling stimulus in this group. Differences in plasma E₂ levels between longer and shorter periods of amenorrhea may reflect dissimilar endogenous production, intake, or clearance of estrogens.