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Maternal and pregnancy-related factors affecting human milk cytokines among Peruvian mothers bearing low-birth-weight neonates

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Highlights

- 1) A core of 12 cytokines is detected in human milk across different lactation stages
- 2) Specific pregnancy complications are associated with distinct breast milk cytokine signatures
- 3) Mothers of very small neonates have higher concentrations of many cytokines in their breast milk

Abstract

Several cytokines have been detected in human milk but their relative concentrations differ among women and vary over time in the same person. The drivers of such differences have been only partially identified, while the effect of luminal cytokines in the fine-regulation of the intestinal immune system is increasingly appreciated. The aim of this study was to investigate the associations between obstetrical complications and human milk cytokine profiles in a cohort of Peruvian women giving birth to Low Birth Weight (LBW) infants.

Colostrum and mature human milk samples were collected from 301 Peruvian women bearing LBW infants. The concentration of twenty-three cytokines was measured using the Luminex platform.