Breastfeeding-Related Pain, Sensory Over-Responsivity (SOR), And Exclusive Breastfeeding 6 Months After Birth: A Cohort Prospective Study

Freund-Azaria A[1,2], Bart O[1], Regev R[3] and Bar-Shalita T[1]

DOI: 10.14434/do.v16i1.35772

[1]Occupational Therapy Department, School of Health Professions, Faculty of Medicine Tel-Aviv University, Ramat Aviv, Tel Aviv, Israel. [2]Department of Neonatology, Meir Medical Center, Kfar-Saba, Israel.
[3]Clalit health organization and neonatal follow-up clinic, Meir Medical Center, Kfar-Saba, Israel.

Background

Although exclusive breastfeeding is recommended for the first six months of life, breastfeeding rates in most developed countries are low. Sensory over-responsivity (SOR) is a neuro-developmental condition characterized by exaggerated behavioral responses to sensory stimuli not typically perceived as irritating, aversive, unpleasant, or painful. SOR was found to severely interfere with everyday activities and quality of life, including having an impact on attachment patterns and maternal competencies. SOR and its link to breastfeeding-related pain have not yet been examined as potential barriers to exclusive breastfeeding.

Aims

To explore whether mother breastfeeding-related pain, sensory over-responsivity and daily pain sensitivity are associated with non-exclusive breastfeeding six months after birth.

Methods

Mothers of full-term infants were recruited two days after birth in a maternity ward. For the assessment of breastfeeding-related pain, mothers completed the Visual Analogue Scale and the Short Form-McGill Pain Questionnaire at enrollment (T1), and at 6 weeks after birth (T2). At 6 months (T3), mothers completed the Pain Sensitivity Questionnaire and the Sensory Responsiveness Questionnaire (SRQ) assessing SOR, provided information about their breastfeeding status, and were then divided into two groups accordingly: Exclusive breastfeeding (EBF) and Non-exclusive breastfeeding (NEBF).

Results

A total of 164 mothers reached the third time point: EBF (n=105), NEBF (partial breastfeeding or formula feeding only) (n=59). The incidence of SOR was significantly higher among NEBF mothers compared to EBF mothers (25.4% vs. 11.4%, respectively, $p=.02$). Moreover, between T1 and T2, 72.3% of the EBF mothers had reported at least 30% pain reduction, compared to 44.8% of the NEBF mothers ($p=.001$). Results also revealed positive correlations between breastfeeding-related pain and the SRQ-aversive score both at T1 ($.268<r<.378$; $.003<p<.028$) and T2 ($.296<r<.380$; $.003<p<.024$).
Logistic regression modeling revealed that both breastfeeding-related pain reduction between T1 and T2 and SOR were found to predict NEBF at 6 months ($p<.001$), indicating a 3.2-times ($p=.001$) and 2.5-times ($p=.041$) odds ratio for NEBF respectively.

Conclusion

SOR and sustained breastfeeding-related pain predict NEBF 6 months after birth and may emerge as meaningful breastfeeding barriers. Our findings highlight the importance of early identification of women with sensory responsiveness challenges for achieving higher exclusive breastfeeding rates. Early interventions, including modulation of unpleasant and overwhelming sensory stimulation in the NICU, as well as individualized breastfeeding support tailored to the mother's unique sensory profile, are encouraged.

Relevance to NIDCAP

Breastfeeding rates of premature infants are lower than the WHO recommendations despite its proven benefits, specifically for this sensitive population. Promoting breastfeeding in the NICU is a significant challenge that involves both medical and emotional aspects of the infant, the mother, and their developing relationship. The NIDCAP approach to care emphasizes the provision of an optimal sensory environment for the developing infant, as well as the support for early mother-infant interactions. Increased attentiveness to the mother's sensory experience may be especially important in the context of breastfeeding in the NICU, where mothers might be exposed to unfamiliar, distressing and overloading environmental stimuli. Adaptive responses to the mother's sensory needs and environmental adaptation may impact breastfeeding success and as a result increase breastfeeding rates in the NICU and after discharge.