

P 49. EFFECT OF EXPRESSED BREAST MILK AND SKIN TO SKIN CONTACT IN KANGAROO POSITION ON PAIN RELATED BEHAVIOR IN PRETERM INFANTS DURING HEEL LANCING

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Background: Preterm infants in NICU are subjected to painful stimuli for various investigations and treatment.

Objective: To determine whether expressed breast milk (EBM) and skin to skin contact between mothers and their newborn infants in Kangaroo position will reduce pain during heel lancing.

Subjects & Methods: Prospective randomized control trials in Level III NICU; Sixty preterm neonates with postnatal age < 4 weeks, maturity score < 37 weeks (New Ballard Scoring), in stable cardio respiratory status and on full feeds were randomized into 3 groups. Group 1 (n=20) received Skin-to-Skin contact in Kangaroo mother care position (Mothers lie down on the bed in supine position, with their infants placed in Kangaroo bags in skin- to skin contact for 15 minutes prior to heel lancing). Group 2 (n=20) received expressed breast milk (2 ml of expressed breast milk was given orally using 2 ml syringe, 2 minutes before the heel lance). Group 3 (n=20) were controls (infants were kept wrapped in blanket during heel lancing). All infants were matched for gestational & chronological age, birth weight and all the baseline parameters (HR, RR, SaO₂, cry & grimace). They were all subjected to heel lancing using a spring loaded device and evaluated in Stage III & IV of PrechtI and Beintema scale, every 30 sec for physiological (Heart rate, Respiratory rate and Oxygen saturation) and behavioural parameters (duration of cry and grimace) of pain. Babies age < 4 hrs, Neurologically abnormal, Exposure to sedatives/ analgesics within 5 days, Gross congenital anomalies were excluded. **Results:** There was no significant difference in change of HR, RR and SaO₂ in all the three groups. However, duration of cry and grimace were both significantly shorter following skin-to-skin contact as well as expressed breast milk as compared to controls ($p < 0.05$ for both *cry* and *grimace*). Further, duration of cry and grimace were significantly less in skin to skin contact group as compared to breast milk group ($p < 0.05$).

Conclusion: Skin-to-skin contact and expressed breast milk are effective means of alleviating behavioral parameters of pain in preterm newborns. Also skin to skin contact in Kangaroo position is more effective in alleviating pain as compared to expressed breast milk.

Keywords: Skin to Skin contact and pain behaviour. EBM and pain