

Title: Effectiveness of Kangaroo position on pain response among neonates during a heel stick procedure – A RCT

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Aim: To assess the effectiveness of kangaroo position on pain response among neonates during a heel stick procedure

Study Design: Randomised controlled trial.

Methodology: Forty neonates > 35 weeks who required a heel stick procedure in the postnatal wards were randomised into intervention group (Kangaroo position) and control group by computer generated random numbers after obtaining written informed consent. Skin to skin contact between mother and neonate was administered in the experimental group for 15 minutes and physiological (heart rate- HR and saturation - SaO₂) and behavioural response to pain (by neonatal facial coding scale – NFCS and crying time) were assessed in both experimental and control group during the heel lancing procedure for 2 minutes.

Statistical analysis: Student t test with SPSS version 16.

Results: The physiological response to heel stick was similar in both the kangaroo position group and control groups (HR at 30, 60 and 120 seconds : 132±17, 126±15, 124±11 vs 133±17, 126±19, 127±15 b/min; SaO₂ at 30, 60 and 120 seconds: 93.2±2.1, 92±2.3, 93±2 vs 92±2.4, 93±2.3, 93.4±2.3). The NFCS scores and mean crying time was lower in the kangaroo position group at all times (NFCS at 30, 60 and 120 seconds : 2.65±2.51, 1.2±1.9, 0.4±1.14 vs 5.85±2.49, 1.95±3.15, 1.1±2.31; mean crying duration at 30, 60 and 120 seconds: 5.95±9.91, 1.8±4.89, 0.5±2.24 Vs 9.05±10.11, 5.75±13.01, 1.9±4.93) but it reached statistical significance for only the NFCS score at 30 seconds (p<0.005).

Conclusion:

Kangaroo position reduces the immediate behavioral response to pain during heel stick.