

CANNULATION: PERIPHERAL VENOUS Supporting information

EMLA (Eutectic Mixture of Local Anaesthetics) cream is not used in neonates?

A 2019 systematic review of RCTs examined whether EMLA cream reduced the pain during venipuncture in infants (> 3 months) [Shahid, 2019]. Ten randomized controlled trials (907 infants) were included. EMLA revealed little or no effect in reduction of pain (standardized mean difference: 0.14; 95% confidence interval [CI]: -0.17 to 0.45; 6 trials, n = 742) when EMLA was compared with sucrose, breastfeeding, or placebo. In comparison with placebo, EMLA revealed a small-to-moderate effect on increasing methemoglobin levels (mean difference: 0.35; 95% CI: 0.04 to 0.66; 2 trials, n = 134). There was an increased risk of blanching of the skin in the EMLA group (relative risk: 2.63; 95% CI: 1.58 to 4.38; 2 trials, n = 123).

A small RCT in 19 infants (Acharya, 1998) found no significant difference in efficacy between EMLA and placebo creams in physiological and behavioural responses. There was no significant difference in methaemoglobin concentrations one hour after the cream had been applied. At eight hours, however, concentrations were significantly higher after EMLA than placebo (p = 0.016). There was no evidence of clinical toxicity. The authors concluded that the results did not support the routine use of EMLA in healthy preterm infants.

Acharya AB, Bustani PC, Phillips JD, et al. Randomised controlled trial of eutectic mixture of local anaesthetics cream for venepuncture in healthy preterm infants. *Arch Dis Child Fetal Neonat Ed* 1998;78:F138-42
<http://fn.bmj.com/content/78/2/F138.long>

Shahid S, Florez ID & Mbuagbaw L. Efficacy and Safety of EMLA Cream for Pain Control Due to Venipuncture in Infants: A Meta-analysis. *Pediatrics*. 2019;143:e20181173
<https://publications.aap.org/pediatrics/article/143/1/e20181173/76856/Efficacy-and-Safety-of-EMLA-Cream-for-Pain-Control>

Evidence Level: I

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