



Peripheral IV catheterization during postnatal stabilization of preterm infants is feasible and successful in most of the cases at first attempt” Baik-Schneditz et al (2017).

Abstract:

BACKGROUND: Current European Guideline for resuscitation recommends a centrally positioned umbilical venous catheter as the best option for administering necessary drugs. Especially in preterm infants, a frequently used alternative is the peripheral venous catheter.

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METHODS: Two randomized controlled studies were conducted at the Division of Neonatology, Medical University of Graz. During neonatal resuscitation, a standardized protocol was filled out by an uninvolved observer including time points after birth of all attempts of venous puncture, time point of successful venous puncture, and total number of needed attempts. Arterial oxygen saturation (SpO₂) and heart rate (HR) were measured using pulse oximetry at the right hand/wrist. In each neonate, either NIRO 200NX (Hamamatsu, Japan) or INVOS 5100C (Covidien-Medtronic, USA) were used to measure cerebral tissue oxygenation index (cTOI) and cerebral regional oxygen saturation (crSO₂), respectively. SpO₂, HR, and cTOI/crSO₂ during and 1 min before and after successful venous

punctures were analyzed.

RESULTS: 70 protocols were reviewed. Data of 61 preterm neonates were analyzed. Mean gestational age was 31.5 ± 2.2 weeks, and the mean birth weight was $1,527 \pm 541$ g. In median, it needed one attempt to establish a peripheral venous catheter. In median, intravenous (IV) catheterization was successfully established 5 (IQR 4-9) min after birth. SpO₂ and cTOI/crSO₂ rose significantly following the percentiles during the first 10 min after the birth. HR did not change significantly.

CONCLUSION: Peripheral IV catheterization during postnatal stabilization of preterm infants is feasible and successful in most of the cases at first attempt.

Full Text

Reference:

Baik-Schneditz, N., Pichler, G., Schwabegger, B., Mileder, L., Avian, A. and Urlesberger, B. (2017) Peripheral Intravenous Access in Preterm Neonates during Postnatal Stabilization: Feasibility and Safety. *Frontiers in Pediatrics*. August 10th. eCollection 2017.

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