Intravenous literature: Arnts, I.J.J., Heijnen, J.A., Wilbers, H.T.M., van der Wilt, G-J., Groenewoud, J.M.M. and Liem, K.D.Â (2011) Effectiveness of heparin solution versus normal saline in maintaining patency of intravenous locks in neonates: a double blind randomized controlled study. 3rd July 2011. .

Abstract:

Aim – The aim of this study was to evaluate the effect of heparin versus saline as flush solution for maintaining patency in peripheral intravenous locks in neonates and to investigate whether other variables influence the longevity of intravenous locks.

Background – Heparin is usually used as a regular flush solution to prevent occlusion of peripheral intravenous locks in neonates. There is no clear recommendation using heparin or saline flushing peripheral intravenous locks in neonates. The disadvantage of heparin cannot be ignored, especially in this patient group.

Methods – In a double blind prospective randomized study, neonates (gestational age >27 weeks) with intravenous locks were randomly assigned to receive heparin or saline as a flush solution in a 21-month period (2002â€“2004). The main outcome was the duration of patency.

Results – Eighty-eight neonates were included. No statistically significant difference was found in patency of peripheral intravenous locks flushed with 0Â·7 mL heparin (10 units/mL) (N = 42, median 56 hours) or 0Â·7 mL saline (N = 46, median 61 hours). When the analysis was confined to removed locks because of non-elective events, no statistically significant difference was found in duration of patency (P = 0Â·27).

Conclusion – As no difference in patency could be established, using saline as a flush solution is preferable to heparin in peripheral intravenous locks in neonates, given the greater likelihood of complications associated with heparin. Although these data are more than 5 years old, the relevance of the outcome is still important for the clinical practice because of the potential adverse effects of heparin in these vulnerable infants.