

To identify patient, hospital, and central venous catheter factors that may influence the use of low-dose heparin infusion for central venous catheter patency in critically ill children” Onyeama et al (2016).

Abstract:

OBJECTIVES: To identify patient, hospital, and central venous catheter factors that may influence the use of low-dose heparin infusion for central venous catheter patency in critically ill children.

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DESIGN: Secondary analysis of an international multicenter observational study.

SETTING: Fifty-nine PICUs over four study dates in 2012, involving seven countries.

PATIENTS: Children less than 18 years old with a central venous catheter who were admitted to a participating unit and enrolled in the completed Prophylaxis against Thrombosis Practice study were included. All overflow patients were excluded.

INTERVENTIONS: None.

MEASUREMENTS AND MAIN RESULTS: Of the 2,484 patients in the Prophylaxis against Thrombosis Practice study, 1,312 patients had a central venous catheter. Five hundred seven of those patients used low-dose heparin infusion. The frequency of low-dose heparin infusion was compared across various patient, hospital, and central venous catheter factors using chi-square, Mann-Whitney U, and Fisher exact tests. In the multivariate analysis, age was not a significant factor for low-dose heparin infusion use. Patients with pulmonary hypertension had decreased low-dose heparin infusion use, whereas those with active surgical or trauma diagnoses had increased low-dose heparin infusion use. All centrally inserted central venous catheters were more likely to use low-dose heparin infusion when compared with peripherally inserted central venous catheters. The Asia-Pacific region showed increased low-dose heparin infusion use, along with community hospitals and

smaller ICUs (< 10 beds).

CONCLUSIONS: Patient, central venous catheter, and hospital factors are associated with the use of low-dose heparin infusion in critically ill children. Further study is needed to evaluate the efficacy and persistence of low-dose heparin infusion use.

Reference:

Onyeama, S.N., Hanson, S.J., Dasgupta, M., Hoffmann, R.G. and Faustino, E.V. (2016) Factors Associated With Continuous Low-Dose Heparin Infusion for Central Venous Catheter Patency in Critically Ill Children Worldwide. *Pediatric Critical Care Medicine*. June 29th. .

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