Prospective, randomized evaluation of the efficacy of fibrin sealant as a topical hemostatic agent at the cannulation site in neonates undergoing extracorporeal membrane oxygenation.

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Abstract:

BACKGROUND: The topical hemostatic effect of fibrin sealant that has been solvent/detergent treated and plasminogen depleted was evaluated in a multicenter prospective, randomized controlled study at the cannulation site wound of infants undergoing extracorporeal membrane oxygenation (ECMO).

METHODS: The test group received standard cauterization and Fibrin sealant, while the control group was given cauterization alone to control hemostasis at this site. Efficacy data were available on 173 randomized study subjects of whom 149 met study entry criteria. All were managed according to standard ECMO practice.

RESULTS: Fibrin sealant reduced the risk of bleeding, was associated with less shed blood, and was associated with shorter duration of hemorrhage. Further, control infants showed an increased bleeding risk with less depressed fibrinogen levels and prothrombin time elevations >18 seconds prior to ECMO.

CONCLUSION: Fibrin sealant is useful as a topical hemostatic agent in patients with coagulopathy not responding to standard surgical techniques.