

Bleeding following Pediatric Heart Surgery is Better Controlled using Thromboelastography Results

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Bleeding following surgery for congenital cardiac anomalies is a relatively common life threatening complication. We have formulated a novel protocol for the treatment of bleeding, in the immediate post operative period, in infants and children following cardiac surgery. Our protocol covers the entire spectrum of clinical situations of the bleeding patient. It offers treatment guidelines for the patient with TEG results, as well as for the patient for whom TEG results are not available, in whom the treatment is guided by the conventional coagulation profile laboratory results, if available. The treatment guidelines include the use of all blood products and relevant medications, including activated factor seven VIIa (NOVO 7).

A comparison of treatment efficacy with and without TEG results was done. Of the 498 infants and children that underwent surgery since the opening of the EJSCHC, serious bleeding was found in 83, comprising 16 % of the patients. TEG was performed in a total of 46 patients.

Comparing patient characteristics, severity of the bleeding, bleeding time period, and the amounts and type of blood products used, the results demonstrate a more focused and efficient treatment when TEG results were used. The amount of bleeding was less, length of time of bleeding was shorter, less blood products (specifically PRBC) were used, and fewer patients required treatment with NOVO 7.