This is the first prospective, randomised controlled trial powered to test the hypothesis of whether omitting forgoing platelet transfusion prior to central venous cannulation leads to an equal occurrence of clinical relevant bleeding complications in critically ill and haematologic patients with thrombocytopenia" van de Weerdt et al (2018).

Abstract:

BACKGROUND: Severe thrombocytopenia should be corrected by prophylactic platelet transfusion prior to central venous catheter (CVC) insertion, according to national and

international guidelines. Even though correction is thought to prevent bleeding complications, evidence supporting the routine administration of prophylactic platelets is absent. Furthermore, platelet transfusion bears inherent risk. Since the introduction of ultrasound-guided CVC placement, bleeding complication rates have decreased. The objective of the current trial is, therefore, to demonstrate that omitting prophylactic platelet transfusion prior to CVC placement in severely thrombocytopenic patients is non-inferior compared to prophylactic platelet transfusion.

METHODS/DESIGN: The PACER trial is an investigator-initiated, national, multicentre, single-blinded, randomised controlled, non-inferior, two-arm trial in haematologic and/or intensive care patients with a platelet count of between 10 and 50 × 109/L and an indication for CVC placement. Consecutive patients are randomly assigned to either receive 1 unit of platelet concentrate, or receive no prophylactic platelet transfusion prior to CVC insertion. The primary endpoint is WHO grades 2-4 bleeding. Secondary endpoints are any bleeding complication, costs, length of intensive care and hospital stay and transfusion requirements.

DISCUSSION: This is the first prospective, randomised controlled trial powered to test the hypothesis of whether omitting forgoing platelet transfusion prior to central venous cannulation leads to an equal occurrence of clinical relevant bleeding complications in critically ill and haematologic patients with thrombocytopenia.

TRIAL REGISTRATION: Nederlands Trial Registry, ID: NTR5653 (http://www.trialregister.nl/trialreg/index.asp). Registered on 27 January 2016. Currently recruiting. Randomisation commenced on 23 February 2016.

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van de Weerdt, E.K., Biemond, B.J., Zeerleder, S.S., van Lienden, K.P., Binnekade, J.M. and Vlaar, A.P.J. (2018) Prophylactic platelet transfusion prior to central venous catheter placement in patients with thrombocytopenia: study protocol for a randomised controlled

trial. Trials. 19(1), p.127.

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