

Role of Activated Partial Thromboplastin Time (APTT) to Assess the Need of Platelet Transfusion in Dengue

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Abstract : Background: In India, platelet transfusions are given to large no. of patients suffering from dengue due to the fear of bleeding especially when the platelet counts are low. Though many patients do not bleed when the platelet count falls to less than 20,000, certain patients bleed even if the platelet counts are more than 20,000 without any comorbid condition (like gastrointestinal ulcer) in the past. This fear has led to huge amounts of unnecessary platelet transfusions which cause significant economic burden to low and middle-income countries like India and also sometimes these transfusions end with transfusion-related adverse reactions. Objective: To identify the role of Activated Partial Thromboplastin Time (APTT) in comparison with thrombocytopenia as an indicator to assess the real need of platelet transfusions. Method: A prospective study was conducted at a hospital in South India which included 176 admitted cases of dengue confirmed by immunochromatography. APTT was performed in all these patients along with platelet count. Cut off values of > 60 seconds for APTT and < 20,000 for platelet count were considered to assess the bleeding manifestations. Results: Among the total 176 patients, 56 patients had bleeding manifestations like malena, hematuria, bleeding gums etc. APTT > 60 seconds had a sensitivity and specificity of 93% and 90% respectively in identifying bleeding manifestations where as platelet count of < 20,000 had a sensitivity and specificity of 64% and 73% respectively. Conclusion: Elevated APTT levels can be considered as an indicator to assess the need of platelet transfusion in dengue. As there is a significant variation among patients who bleed with respect to platelet count, APTT can be considered to avoid unnecessary transfusions.

Keywords : activated partial thromboplastin time, dengue, platelet transfusion, thrombocytopenia

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