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Quick response code

Transfusion practices in trauma

Sir,

I read the recently published article by Ramakrishnan and Cattamanchi[1] on "Transfusion practice in trauma" with great interest. The authors have advocated the use of high ratio, that is 1:1:1 of fresh frozen plasma (FFP): Packed red blood cell (RBC): Platelet concentrate in trauma patients with life-threatening injuries. The article is convincing but few points need to be considered in the current practice.

Although many published studies have supported high FFP: RBCs ratio, these observations have their own limitations.[2,3] A recent analysis of 26 studies relating to blood ratios in trauma concluded that because of the difficulties presented in trying to exclude survivor bias, the available evidence relating to higher ratios of FFP: RBC are inconclusive, and prospective trials are required.[3]

The article has emphasised the importance of early recognition of trauma-induced coagulopathy (TIC) but the standard laboratory tests (prothrombin time, international normalised ratio, and/or activated partial thromboplastin time) used in most trauma centres to assess coagulopathy and guide haemostatic therapy require extended length of time to process the results. Thus, these tests defeat the idea of early recognition of TIC. In addition, these lab tests do not address many important issues such as clot strength and stability and extent of any existing hyperfibrinolysis etc.

Authors have mentioned point of care coagulation testing as a future substitute to formula-driven methodology. The individualised theragnostic management of TIC holds many advantages over the ratio-driven approach.[4] Goal directed transfusion therapy guided by thromboelastography and rotational thromboelastometry relies on real-time monitoring of coagulation status to guide the targeted supplementation of haemostatic agents; evaluation of subsequent response to blood component therapy rapidly addresses the haemostatic needs of the individual. Thus, we can prevent inappropriate treatment of post-injury coagulopathy where less transfusion may not effectively treat TIC and little more transfusion may increase the risk of acute respiratory distress syndrome, multiple organ failure and acute lung injury.

Hence, in the present scenario where more prospective randomised controlled trials are required to establish the optimum ratios of blood products and where there is no consensus among physicians regarding goal directed therapy, we are still in dilemma. Further studies may enforce the later strategy in practice of blood transfusion in trauma and may protect patients from avoidable complications of unnecessary transfusion of blood products.

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