Timing of recombinant activated factor VII administration in severe bleeding cardiac surgery patients: Does it make difference?

Mahmoud Abdalla  
Heart Hospital– Hamad Medical Corporation, Qatar

Introduction: Perioperative severe bleeding remains a frequent complication in cardiac surgery with high morbidity and mortality. Recombinant activated factor VII (rVIIa) is administered for the management of many cases of severe bleeding in cardiac surgery with improvement of outcome. We hypothesize that there may be differences in the efficacy and safety of early versus late administration of rVIIa.

Methods: A retrospective descriptive analytic study involved all patients who received rFVIIa in cardiac surgery department over the past six years duration with a total number of 50 patients. The studied population were divided into two groups according to the timing of rFVIIa administration; early group who received rVIIa within the first two hours of bleeding onset (23 patients) and late group if rVIIa was given after two hours of the bleeding onset (27 patients). Pre-operative, intraoperative and postoperative data were collected and statistically analyzed.

Results: There were no significant statistical demographic or surgical differences between the identified groups. Post-operatively, statistically significant lower post-operative blood loss (p=.001), blood transfusion (p=.02), FFP (p=.02), platelets transfusion (p=.02) and incidence of re-exploration (p=.02) in the early rVIIa administration group were noted (Table 1) (Fig 1, 2). There was no difference in the lengths of mechanical ventilation or hospital stay but length of ICU stay was significantly longer in the late rVIIa administration group.

Conclusion: In this analysis, early rVIIa administration of in severe bleeding cardiac surgery patients showed less blood loss, less need for blood and blood products compared to late administration with additional benefits of lower surgical re-explorations in the early group. However, long term safety still remains unclear.

mabdalla@hamad.qa