

Use of Factor VIIA

Blood Product Replacement: Obstetric Hemorrhage

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The use of Recombinant factor VIIa has been shown in a number of case series to reduce ongoing massive obstetrical hemorrhage.¹⁻⁴ The use of recombinant factor VIIa for obstetrical or trauma hemorrhage would be considered “off label” use. Dosing for recombinant factor VIIa in trauma and obstetrical patients has varied (60-90 mcg/kg) and no studies have attempted to identify the ideal dose in the setting of maternal hemorrhage.³ Anecdotal experience from members of this committee suggests that lower dosages have also been effective. It should be noted that most members of this committee who have experience using recombinant VIIa have reported anecdotal cases of maternal thrombosis; unfortunately, none of these have been reported in the literature.

The committee recognizes that recombinant factor VIIa may not be available in smaller centers and/or non-trauma centers. If available, its use should be limited to patients after reasonable attempts for correction of ongoing bleeding with conventional therapy have failed (i.e., after the use of 10-12 units PRBC, 6-9 units FFP, 2-3 apheresis platelet units and cryoprecipitate). In addition, prior to treatment the patient’s platelet count should be $\geq 50,000/\mu\text{L}$. If the patient’s platelet count is not $\geq 50,000/\mu\text{L}$, platelets should be given concurrently. Due to their negative impact on all coagulation factors correction, acidosis and/or hypothermia is essential for successful use of recombinant factor VIIa.

Based on available data, initial dosing of recombinant factor VIIa should be between 30-90 mcg/kg and repeated in 20-30 minutes if < 90 mcg/kg was used and there was no clinical response. Additional dosing may be helpful if there was no initial clinical response and if hypothermia and/or acidosis have been corrected. Adoption of a massive obstetrical hemorrhage policy that includes recombinant factor VIIa should be reviewed and approved in conjunction with laboratory medicine, pharmacy and the local blood bank depending on who supplies and distributes this agent. If there is continued coagulopathy, and an initial response was seen, additional dosing may be used in 2-3 hours due to the relatively short half-life of recombinant factor VIIa. Further treatment should be provided in consultation with a local and/or regional expert in the area of maternal coagulopathy/massive obstetrical hemorrhage. It should also be emphasized that the use of conventional therapy (PRBCs, platelets, FFP, and cryoprecipitate) should also continue.

References

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