

Bleeding news



Managing the coagulopathy of postpartum hemorrhage: an evolving role for viscoelastic hemostatic assays

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Postpartum hemorrhage (PPH) is still the main cause of maternal mortality worldwide.

In the most privileged healthcare systems, it accounts for 80% of maternal morbidity, including the transfusion of blood products, ICU admissions, hysterectomies, and long-term psychological effects.

The incidence of PPH has increased due to risk factors such as obesity and C-section births.

As the classic teaching goes, in the etiology of PPH we must remember the four Ts: tone, tissue, trauma, and thrombin.

PPH management guidelines range between empiric transfusion and goal-directed therapy. None of them conveys a clear role for viscoelastic tests, and these are in fact not present in many maternity units because of their cost and a lack of sound evidence for their usefulness.

The authors have used over 12 years and have developed a binary algorithm for both ROTEM and TEG, to guide the replacement of fibrinogen and plasma.

Using the description of three clinical cases of PPH—the first one with normal coagulation, the second one with dilutional coagulopathy, and the third one with acute-onset obstetric coagulopathy,—the authors seek to shed some light on the heterogeneity in the presentation and management of coagulation in this obstetric emergency.

Trauma-induced coagulopathy has often been taken as a model for treatment in other hemorrhage scenarios, and this is a mistake, since in most cases obstetric hemorrhage hemostatic parameters stay within a normal range, on account of the physiological increase of coagulation factors during pregnancy. The continuation of an obstetric bleeding can however lead to a dilutional coagulopathy, and plasma replacement would become necessary in that case.

VETs should be present to reassure physicians in terms of the hemostatic situation and any deficiency to be corrected.

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Regardless of the underlying mechanism to the PPH, an early administration of tranexamic acid is recommended, as backed by the WOMAN trial, and fibrinogen should be replaced.

To ensure an optimal outcome in PPH scenarios, an early identification of the condition is fundamental, based on the quantification of blood loss, to trigger the alert for multidisciplinary treatment and the performance of VET to determine the best hemostatic therapy.