



Platelet-sparing Peripartum Hemostatic Management in Glanzmann Thrombasthenia: Prophylactic rFVIIa plus Tranexamic Acid for Planned Vaginal Delivery

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BACKGROUND

Glanzmann thrombasthenia (GT) is a rare inherited platelet function disorder caused by GPIIb/IIIa deficiency.¹

Impaired platelet aggregation contributes to major obstetric bleeding risk.¹

Platelet transfusion may control bleeding, but platelet-sparing strategies may reduce alloimmunization and future refractoriness.²

Recombinant activated factor VII (rFVIIa) is a potential hemostatic option in selected peripartum settings.³

Clinical Question

Can vaginal delivery be achieved safely without platelet transfusion?

Platelet-sparing approach

Avoid platelet exposure if feasible; keep HLA-matched rescue units immediately available.

Multidisciplinary planning

Hematology, obstetrics, anesthesia, and neonatology aligned before induction.

Protocol-based hemostatic strategy

Predefined hemostatic plan for labor and postpartum monitoring.

[1] Fiore M, et al. Blood. 2022;139:2632–2641.

[2] Rutten KHG, et al. Br J Haematol. 2025;207:1702–1708.

[3] European Medicines Agency. NovoSeven (eptacog alfa activated) EPAR: Product Information (Glanzmann's thrombasthenia section).

THE CASE



30-year-old G1P0 with type 1 GT and severe mucosal bleeding phenotype.

Negative HLA antibody screen.



Induction at 40 weeks; neuraxial anesthesia avoided, nitrous oxide used for labor analgesia.

2 HLA-matched single-donor platelet units available for rescue; not required.

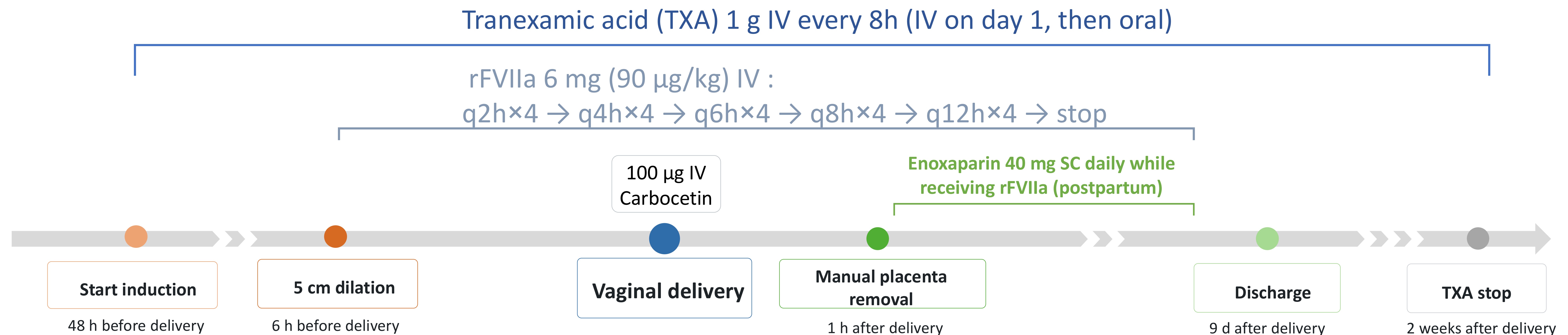


Term vaginal delivery (Apgar 8/9/10); stable maternal hemodynamics.

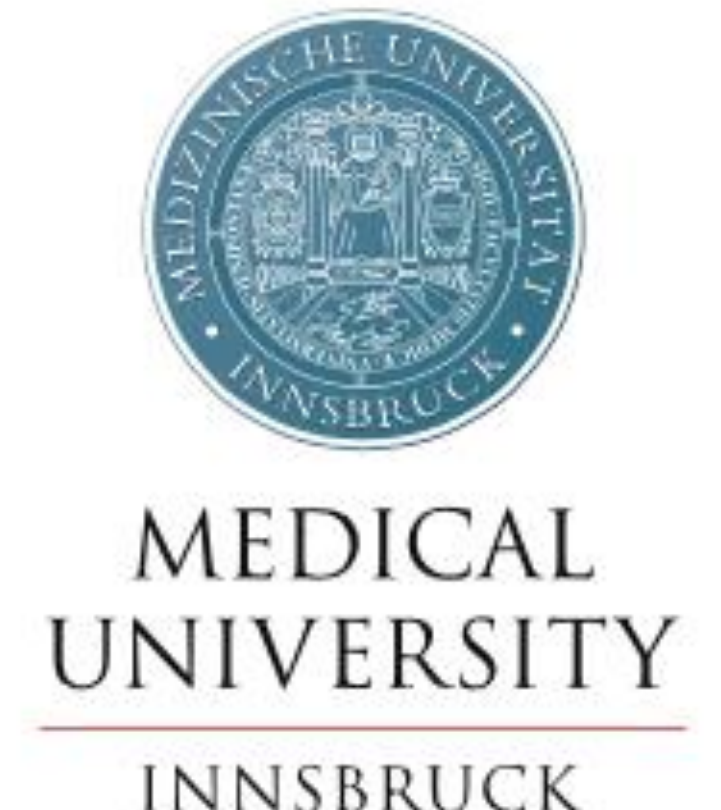
No transfusion; no thrombotic or major bleeding complications.

QBL 600 mL at delivery | + 400 mL during manual placental removal 1 h postpartum

Hemostatic timeline



TEACHING POINTS



1

Define the delivery and rescue plan before labor

Schedule delivery, align the multidisciplinary team, and maintain an explicit rescue pathway with immediate access to HLA-matched platelets.

2

Use a protocol-based hemostatic strategy

TXA plus step-down rFVIIa enabled a platelet-sparing approach through delivery and an unplanned postpartum procedure.

3

Measure objectively and monitor closely

Objective QBL, serial labs, and ROTEM supported treatment decisions, while postpartum care balanced bleeding surveillance with thrombosis prophylaxis.

4

Anesthetic flexibility remains important

Neuraxial techniques were avoided; nitrous oxide supported labor, and general anesthesia allowed manual placental removal.

Take-home message:

In severe GT, a predefined multidisciplinary pathway using TXA and step-down rFVIIa may support planned vaginal delivery while avoiding platelet transfusion, with rescue platelets immediately available if needed.