A Case Report: Factor VII Deficiency and Previous Ischaemic Stroke – Balancing the Coagulation Profile in the Peripartum Period

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Background

Congenital factor VII deficiency (FVIID) is rare genetic disorder with an autosomal recessive inheritance. Factor VII is a vitamin K dependent procoagulant factor, when active, initiates the coagulation cascade with tissue factor to ultimately form a cross linked-fibrin clot[1]. Manifestations of the deficiency can vary vastly and predictions for risk of bleeding during and postpartum is difficult[1]. Risk stratification for bleeding and clotting risk is monitored throughout every pregnancy. Ischaemic strokes in pregnancy are also a rare occurrence with the incidence in literature ranging from 4.3-210 per 100,000 deliveries[2]. There have been several case reports of women with FVIID having thrombotic events which are usually provoked e.g. pregnancy or post surgical. The data suggests that FVIID may not be a protective factor against thrombotic events[3].

Aims

The aim of this case is to highlight the management of FVIID complicated by a history of a previous ischemic stroke in the peripartum period.

Case

31-year-old gravida 2 para 1, 39 weeks pregnant with a background of a left posterior circulating artery territory stroke presumed secondary to paradoxical embolism at 19/40 last pregnancy in 2021 (known small patent foramen ovale) as well as congenital mild FVIID (baseline level 26%). BMI 23. Para 1 – SVD with epidural without significant bleeding. She was commenced on prophylactic clexane (40mg daily) from 22/40. The patient continued clexane until 38 weeks and switched to heparin 5000IU twice daily until delivery. Aspirin was continued throughout the entire pregnancy.

An induction was planned for heparin timing at 39/40. She received Novoseven (rFVIIa) 2mg and 1mg tranexamic acid (TXA) intravenously once in established labour. A repeat dose of Novoseven 1mg every 6 hours whilst epidural catheter remained in situ with a plan to remove the epidural catheter within 1-2 hours of the 1mg dose. An assisted vaginal delivery was performed with Neville-Barnes forceps for a slow second stage with an RML episiotomy and estimated blood loss of 200mL. She continued TXA 1g TDS orally for 14 days post partum.

Discussion

Balancing the coagulation risk profile with history of an ischaemic stroke vs the risk of bleeding in FVIID in the peripartum phase is complex. A multidisciplinary approach with obstetrics, obstetric medicine, haematology and neurology was required. The patient had no complications with the delivery of a healthy live infant and bleeding within normal limits.

References
1. Yang, Y. et al. (2021) Diagnosis and treatment discussion of congenital factor VII deficiency in pregnancy: A case report, World journal of clinical cases. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8316952/
2. Del Zotto, E. et al. (2011) Ischemic stroke during pregnancy and puerperium, Stroke research and treatment. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3038679/
3. Abdul-Kadir, R. and Gomez, K. (2022) Reproductive Health and hemostatic issues in women and girls with congenital factor VII deficiency: A systematic review, Journal of thrombosis and haemostasis : JTH. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9828586/