Postpartum venous thromboprophylaxis needs to be stratified in inflammatory diseases

The perceived benefits and safety of postpartum thromboprophylaxis with low molecular weight heparin (LMWH) have recently been cast into doubt.

A large retrospective cohort study failed to demonstrate a reduced rate of post-partum venous thromboembolism (VTE) despite the introduction of a risk stratification tool that increased the postpartum prescription of heparin 15-fold (Lu MY et al, Obstet Gynecol, 2021, 138:5-538). Furthermore, increased thromboprophylaxis was associated with an increased incidence of wound haematomas, blood transfusions and unplanned surgery. The risk-assessment tool in this study did not include inflammatory bowel disease (IBD) or inflammatory polyarthritis (IP) but its findings lead us to question current UK guidance on thromboprophylaxis for pregnant women with inflammatory diseases (RCOG Green-Top Guideline 37a).

Women with “active SLE, IBD or IP” are listed as at “intermediate” risk of gestational VTE and recommended for consideration of prophylactic LMWH. We are aware that many women with inflammatory disease are offered thromboprophylaxis with LMWH, regardless of disease activity and in the absence of other VTE risk factors.

The baseline risk of antepartum VTE is 12:10000 maternities and both IBD and Rheumatoid Arthritis (RA) double this risk (Bleau N et al, Clin Appl Thromb Hemost, 2016, 22:285-291). Pregnancy-specific data on the interaction between disease flare and VTE risk are limited in IBD and with broad effect sizes, and non-existent in RA. Very little is known about VTE risk in other forms of IP (eg: Psoriatic Arthritis) regardless of pregnancy status. In non-pregnant patients with IBD, the relative risk of VTE increases with disease flare (hazard ratio (HR) 8.4, 95% CI 5.5-12.8), compared with chronic activity (HR 6.5, 95% CI 4.6-9.2) or remission (HR 2.1, 95% CI 1.6-2.9) (Grainge MG et al, Lancet, 2010, 375:657-

663). In non-pregnant RA patients VTE-risk increases during periods of high disease activity (adjusted risk ratio of 2.03, 95% CI 1.73-2.38) (Molander V et al, Ann Rheum Dis, 2021, 80:169-175). Few prior studies have adjusted for acute phase reactants in estimations of VTE risk in RA.

The American Society for Haematology (ASH) 2018 guideline has adopted a far more restrictive approach to thromboprophylaxis in pregnancy and the puerperium than RCOG. ASH set a risk threshold of 2% for prophylaxis in pregnancy and 1% post-partum, thus largely restricting use to previous unprovoked or gestational VTE, or high-risk thrombophilia. Therefore, only active IBD would likely meet the threshold for thromboprophylaxis set by ASH.

In RA pregnancy activity is measured with a composite score called the DAS28(3)CRP which combines swollen joint count, tender joint count and C-reactive protein (CRP) to assign patients as being in remission or in a low, moderate or high activity state. In IBD, non-invasive measures such as CRP and faecal calprotectin, alongside symptoms, radiological and/or histological findings are used to classify activity. We would expect patients with high inflammatory disease activity to be receiving regular input from their parent medical team but if current disease activity is unclear, obstetricians should seek assistance from the relevant medical specialist or an obstetric physician.

Women with inflammatory disorders who maintain low disease activity during pregnancy not only improve their pregnancy outcomes but also reduce their VTE risk. As thromboprophylaxis is not a benign treatment, we recommend LMWH for women experiencing an “active flare”, based on disease specific activity scores. Meanwhile, we urge clinicians caring for pregnant women with inflammatory disorders in low disease-activity states to refrain from routinely recommending prophylactic LMWH based on these diagnoses alone and individualise decision making according to disease activity.