**INHERITED THROMBOPHILIA AND PREGNANCY COMPLICATIONS**

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Pregnancy is a hypercoagulable state with an increased risk for venous thromboembolism (VTE) throughout the gestation and post-partum period. Gestational vascular complications (GVC), including preeclampsia, intrauterine growth restriction, placental abruption and intrauterine fetal demise, are the leading cause of maternal and fetal morbidity and mortality. Hereditary and acquired thrombophilia, which are commonly found in gestational VTE, have also been associated with pregnancy complications.

Suggested pathogenetic mechanisms include increased procoagulant activity in maternal blood, impaired hemostatic balance at the placental trophoblast level and involvement of tissue factor (TF) bearing microparticles (Aharon A. J Thromb Haemost. 2009;7:1047).

The use of antithrombotic agents has been suggested to prevent thrombotic events and potentially improve the pregnancy outcome in women with a history of GVC ( Brenner B. J Thromb Haemost. 2005;3:227; Rey E. J Thromb Haemost. 2009;7:58).

Low molecular weight heparins (LMWH) are the drug of choice in pregnancy due to their demonstrated safety profile and efficacy (Greer IA. Blood. 2005;106:401). Prospective randomized trials suggest that LMWH can be potentially beneficial in women with thrombophilia and a history of pregnancy loss (Gris JC. Blood. 2004;103:3695; Brenner B. J Thromb Haemost. 2005;3:227). However, in women with unexplained miscarriages the use of LMWH has shown an outcome similar to that of aspirin or placebo (Clark P. Blood. 2010;115:4162; Kaandorp SP. N Engl J Med. 2010;362:1586). Adequately powered prospective randomized trials in women with or without thrombophilia will clarify the ultimate role of heparins in prevention of pregnancy complications.