VENOUS THROMBOEMBOLISM,OBSTETRIC, INPATIENT OR OUTPATIENT, PATHWAY

Updated: July 11, 2022

Clinical Pathway Summary

CLINICAL PATHWAY NAME: Obstetric Venous Thromboembolism

PATIENT POPULATION AND DIAGNOSIS: Pregnant women

APPLICABLE TO: Big Rapids, Gerber Memorial, Ludington, Pennock, SH GR Hospitals, SHMG, Zeeland

BRIEF DESCRIPTION: This guideline provides recommendations for a risk assessment and management guide based on published evidence for obstetric patients with venous thromboembolism. The guideline simplifies the approach, so all obstetric patients are accurately assessed for risk of venous thromboembolism (VTE) and treated as indicated.

OPTIMIZED EPIC ELEMENTS (if applicable): VTE/PE Treatment order set

IMPLEMENTATION DATE: July 2022

LAST REVISED:

WORKUP

WHEN TO TEST	LABORATORY EVALUATION
- History of unprovoked VTE -1st Degree relative with history of high-risk thrombophilia	**Full Thrombophilia Panel:** - Protein C and S deficiencies - Factor V Leiden - Prothrombin G20210A - Anticardiolipin - Lupus Anticoagulant - Anti-beta 2 glycoprotein - antithrombin III
-One or more fetal demise or SAB after 10 weeks gestational age -One or more preterm births due to condition associated with placental insufficiency (eclampsia/severe pre-e) -Three or more unexplained SAB before 10 weeks gestational age	**Acquired Thrombophilia Panel:** - Anticardiolipin - Lupus anticoagulant - Anti-beta 2 glycoprotein

TREATMENT

HIGH RISK CATEGORIES	
ANTEPARTUM	**POSTPARTUM**
Treat throughout Entire Pregnancy	**Treat Total 6 Weeks Postpartum**
Prophylactic Dose	
-High-Risk Thrombophilia without history of VTE -History of unprovoked VTE -History of VTE caused by pregnancy or high estrogen state -Antiphospholipid Syndrome with prior adverse pregnancy outcome -Low-risk thrombophilia with history of VTE	-High-risk thrombophilia without history of VTE -History of unprovoked VTE -History of VTE caused by pregnancy or high estrogen state -Antiphospholipid Syndrome without history of VTE, with previous adverse pregnancy outcome -Low-risk thrombophilia with history of VTE
Therapeutic Dose	
-Long term anticoagulation before pregnancy -Mechanical heart valve -High-risk thrombophilia with history of VTE -History of greater than 2 VTE not already on treatment -Antiphospholipid Syndrome with history of VTE	-High-risk thrombophilia with history of VTE -History of greater than 2 VTE not already on treatment -Antiphospholipid Syndrome with history of VTE
Return to previous therapy	
	-Long term anticoagulation before pregnancy -Mechanical heart valve

INTERMEDIATE RISK CATEGORIES	
ANTEPARTUM	**POSTPARTUM**
Starting at 28 weeks gestational age	**For 10 days postpartum**
Prophylactic Dose	
-Sickle cell disease -Maternal heart disease -Active lupus flare -Active inflammatory polyarthropathy -Active inflammatory bowel disease -Uncontrolled nephrotic syndrome -Type I diabetes mellitus with nephropathy	-Sickle cell disease -Maternal heart disease -Active lupus flare -Postpartum transfusion -Immobilization/bedrest for greater than 7 days per expert opinion

LOW RISK CATEGORIES	
ANTEPARTUM	**POSTPARTUM**
If ≥ 4 factors = prophylactic treatment throughout pregnancy **If 3 factors = prophylactic dosage starting at 28 weeks gestational age** **If less than 3 factors = close surveillance**	**If ≥ 4 factors = prophylactic dosage for 6 weeks postpartum** **If 3 factors = prophylactic dosage for 10 days postpartum** **If less than 3 factors = close surveillance**
-Low risk thrombophilia without history of VTE -History of provoked VTE (e.g., long car ride, surgery) -1st degree relative with history of estrogen-provoked VTE -Active smoker greater than 10 cigarettes/day -Age greater than 35 years old at expected delivery date -BMI greater than 40 pre-pregnancy -Active pre-eclampsia, mild or severe -Multiple gestation pregnancy -Immobility/strict bed rest for greater than 7 days	-Low risk thrombophilia without history of VTE -History of provoked VTE (e.g., long car ride, surgery) -1st degree relative with history of estrogen-provoked VTE -Active smoker greater than 10 cigarettes/day -Age greater than 35 years old at expected delivery date -BMI greater than 40 pre-pregnancy -Cesarean delivery -Postpartum hemorrhage (greater than 1 liter blood loss) -Active infection -Pre-eclampsia in this pregnancy, mild or severe -Multiple gestation pregnancy

DEFINITIONS	
High-Risk Thrombophilias	- Factor V Leiden Homozygote - Factor II Homozygote (= Prothrombin =G20210A) - Factor V Heterozygote with Factor II Heterozygote Combination - Antithrombin III Deficiency
Low-Risk Thrombophilias	-Protein C Deficiency -Protein S Deficiency -Factor V Leiden Heterozygote -Factor II Heterozygote

DOSAGE GUIDELINES

Therapeutic dosing	LMWH: Enoxaparin 1mg/kg subcutaneous every 12 hours UFH: IV dose of 5,000 IU loading, then follow protocol and aPTT levels		
Prophylactic dosing	LMWH	50-90kg less than 50kg greater than 90kg	40mg subcutaneous daily 30mg subcutaneous daily 40mg subcutaneous BID
	UFH	First trimester Second trimester Third trimester	5,000 BID 7,500 BID 10,000 BID

DOSAGE GUIDELINES FOR UNIQUE CASES

Complex Issue:	Recommendation:
Ovarian hyperstimulation syndrome	Therapeutic dosage from onset to 12 weeks gestation only
Acute VTE in this pregnancy	Therapeutic dosage until at least 6 weeks postpartum for a total of 6 months from diagnosis
Surgery during pregnancy (e.g., appendectomy)	Prophylactic dosage while inpatient during hospital stay
Cardiomyopathy or maternal cancer	Prophylactic dosing at conception if pre-existing conditions or at time of diagnosis during pregnancy and continue through 6 weeks postpartum
Mechanical heart valve	Maintain Coumadin if less than or equal to 5mg throughout; convert to therapeutic LMWH 1 week prior to delivery

Abbreviations:
VTE – venous thromboembolism
SAB – Spontaneous Abortion
Pre-e – Pre-eclampsia
LMWH – Low-Molecular Weight Heparin
UFH – Unfractionated Heparin

Pathway information

OWNERS(S): Dr. Lisa Thiel

CONTRIBUTOR(S): CNS Charmaine Kyle

EXPERT IMPROVEMENT TEAM (EIT): Obstetrics EIT

CLINICAL PRACTICE COUNCIL (CPC): Women's Health

CPC APPROVAL DATE: August 18, 2022

OTHER TEAM(S) IMPACTED:

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