Risk assessment and thromboprophylaxis
with SARS-CoV-2 infection in pregnancy and post-partum

Irish Haematology Society Coagulation Special Interest Group
Institute of Obstetricians and Gynaecologists, Royal College of Physicians of Ireland
National Women and Infants Health Programme, HSE

January 2022 Update

Guidance

Justification

The risk of thromboembolic disease is increased during pregnancy and postpartum and appears to be further increased in the presence of COVID-19 disease, though absolute risk remains low. Thromboembolic disease with SARS-CoV-2 infection in pregnancy may be more likely in the presence of more severe infection and hospitalisation. The evidence base in this clinical setting is evolving and may be incomplete due to the exclusion of pregnant women from many clinical trials.

In the context of the evidence that is currently available, the following statements are made to provide guidance to Clinicians.

- The Institute of Obstetricians and Gynaecologists Guideline on Venous Thromboprophylaxis in Pregnancy (RCPI, 2013) should continue to be followed during the COVID-19 pandemic.
- COVID-19 infection should be considered as an additional transient risk factor for thrombosis and incorporated into VTE risk assessment tools.
- Vaccinated and unvaccinated women should be evaluated and managed in the same way.
- Women with a COVID-19 diagnosis who are self-isolating at home should be encouraged to stay hydrated and mobile. They should be aware of the signs and symptoms of thromboembolism and advised to seek medical advice if these occur.
- Women who are already on antenatal or postnatal thromboprophylaxis should continue this as prescribed, if they contract COVID-19.
- An updated thrombosis risk assessment is appropriate for women with COVID-19 who are self-isolating at home. They should be advised to contact their maternity unit / service provider so that this is arranged.
- If women are hospitalised with COVID-19 illness or a COVID-19 diagnosis is detected incidentally on admission or during an inpatient stay, a thrombosis risk assessment should be done and pharmaceutical thromboprophylaxis should be offered unless birth is expected within 12 hours or there is significant bleeding risk.
- In women with severe SARS-CoV-2 infection, the appropriate dosing regimen for pharmaceutical thromboprophylaxis should be discussed by a multidisciplinary team (MDT), including a senior obstetrician or clinician with expertise in managing thrombosis in pregnancy.
- The duration of thromboprophylaxis, if prescribed, should be individualized. In general, thromboprophylaxis is continued as long as the risk factor for thrombosis is present, which may range from 7-14 days in an acute, short lived illness to longer periods in women with more severe illness and other ongoing risk factors for thrombosis. Post discharge thromboprophylaxis or postpartum thromboprophylaxis for up to 6 weeks may be required if women have ongoing risk factors including immobility.
- Confirmed thrombosis with COVID-19 infection should be managed with therapeutic anticoagulation, as per usual practice.

VTE Risk Assessment Tool (updated; 2022)

Interim updated tool – attached

Evidence summaries at:

Institute of Obstetricians and Gynaecologists, Royal College of Physicians of Ireland and HSE Clinical Care Programme in Obstetrics and Gynaecology and Irish Haematology Society. Clinical practice guideline venous thromboprophylaxis in pregnancy. November 2013
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Nelson-Piercy C, MacCallum, P., Mackillop, L. Reducing The Risk of Thrombosis and Embolism during Pregnancy and The Puerperium. RCOG. 2009; Green Top Guideline No.37a
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Institute of Obstetricians and Gynaecologists, Royal College of Physicians of Ireland. COVID-19 Infection: Guidance for Maternity Services. Version 5.0. 1 May 2021
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Royal College of Obstetricians and Gynaecologists, London. Treatment of COVID-19 in Pregnant Patients. 7 December 2021
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COVID-19 Interim Clinical Guidance - VTE protocol and patient information for Acute Hospitals (CD 120/21.04.20). HSE, 2020
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Society for Maternal-Fetal Medicine. Management Considerations for Pregnant Patients With COVID-19. Developed with guidance from Torre Halscott, MD, MS; Jason Vaught, MD; and the SMFM COVID-19 Task Force. 2 February 2021.
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https://www.npeu.ox.ac.uk/assets/downloads/mbrrace-uk/reports/MBRRACE-UK_Maternal_Report_June_2021_-_FINAL_v10.pdf

Cruz Melguizo S, de la Cruz Conty ML, Carmona Payán P, Abascal-Saiz A, Pintando Recarte P, González Rodríguez L, Cuenca Marín C, Martínez Varea A, Oreja Cuesta AB, Rodríguez PP, Fernández Buhigas I, Rodríguez Gallego MV, Fernández Alonso AM, López Pérez R, Broullón Molanes JR, Encinas Pardilla MB, Ramírez Gómez M, Gimeno Gimeno MJ, Sánchez Muñoz A, Martínez-Pérez O, On Behalf Of The Spanish Obstetric Emergency Group S O E G. Pregnancy Outcomes and SARS-CoV-2 Infection: The Spanish Obstetric Emergency Group Study. Viruses. 2021 May 7;13(5):853. DOI: 10.3390/v13050853

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Rapid Risk Assessment Tool for VTE Thromboprophylaxis in Pregnancy / Post-partum *

All pregnant women require risk assessment for VTE:

At first booking visit **At every antenatal admission** **With current COVID-19 Infection**

Pre-existing Risk Factors	TICK
Family history VTE	☐
BMI >30	☐
Parity > 3	☐
Maternal Age >35	☐
Smoking	☐

Medical Co-morbidities	TICK
Varicose Veins	☐
Paraplegia	☐
Nephrotic syndrome	☐
IV drug user	☐
Inflammatory bowel disease	☐
Haematological condition - Sickle cell anaemia - Polycythaemia /Thrombocythaemia - Myeloproliferative d/o	☐
Diabetes requiring insulin	☐
Active SLE	☐
Other relevant risk factor	☐

Transient Risk Factors	TICK
COVID-19 infection (current)	☐
Hospital admission	☐
Immobility (>4 days bedrest)	☐
Surgery in/after pregnancy	☐
Caesarean section	☐
Instrumental delivery	☐
Excessive blood loss (>1L)	☐
Blood transfusion	☐
Pre-eclampsia	☐
Systemic infection	☐
Multiple Pregnancy	☐
Assisted Reproduction	☐
Hyperemesis gravidarum	☐
Dehydration	☐
Post-partum wound infection	☐

Women with **THREE** or more of the above risk factors → **Consider LMWH Thromboprophylaxis**

*Women with a personal history of VTE = LMWH Thromboprophylaxis