THROMBOPROPHYLAXIS

CLINICAL GUIDELINE MCSA.MBC.2.1

1. Assess women for increased risk of venous thromboembolism (VTE) based on antepartum, intrapartum, and postpartum risk factors after every delivery and repeat as new clinical situations arise. **Universal postpartum thromboprophylaxis is not recommended.**

2. Low molecular weight heparin is the preferred pharmacologic agent over unfractionated heparin for thromboprophylaxis. Low molecular weight heparin doses should be used as per the manufacturer's recommendation.

3. Preferred anti-coagulant is LMWH. Side effects: Allergic skin reaction (rare)

4. Monitor platelet count 1 week after initiation of LMWH and regular follow ups thereafter

5. Antepartum prophylaxis – initiate early in pregnancy

6. Postpartum prophylaxis – continue for 6 weeks post deliver in high risk women

7. 10 days post-delivery for intermediate risk and until discharge for low risk

See Fig. 1 & 2 for antepartum and postpartum risk assessment and management

Obstetric thromboprophylaxis risk assessment and management (RCOG)

Fig. 1

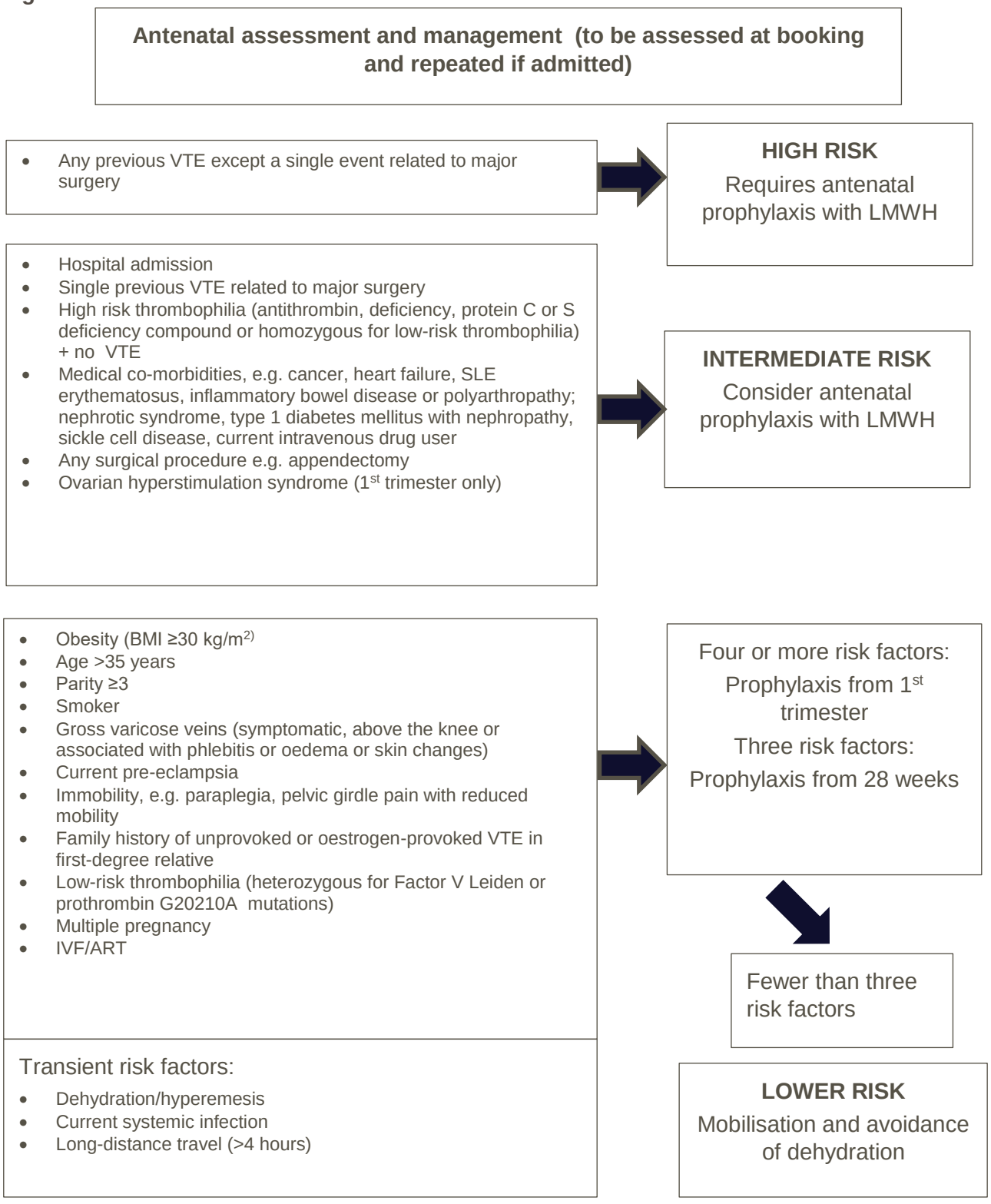
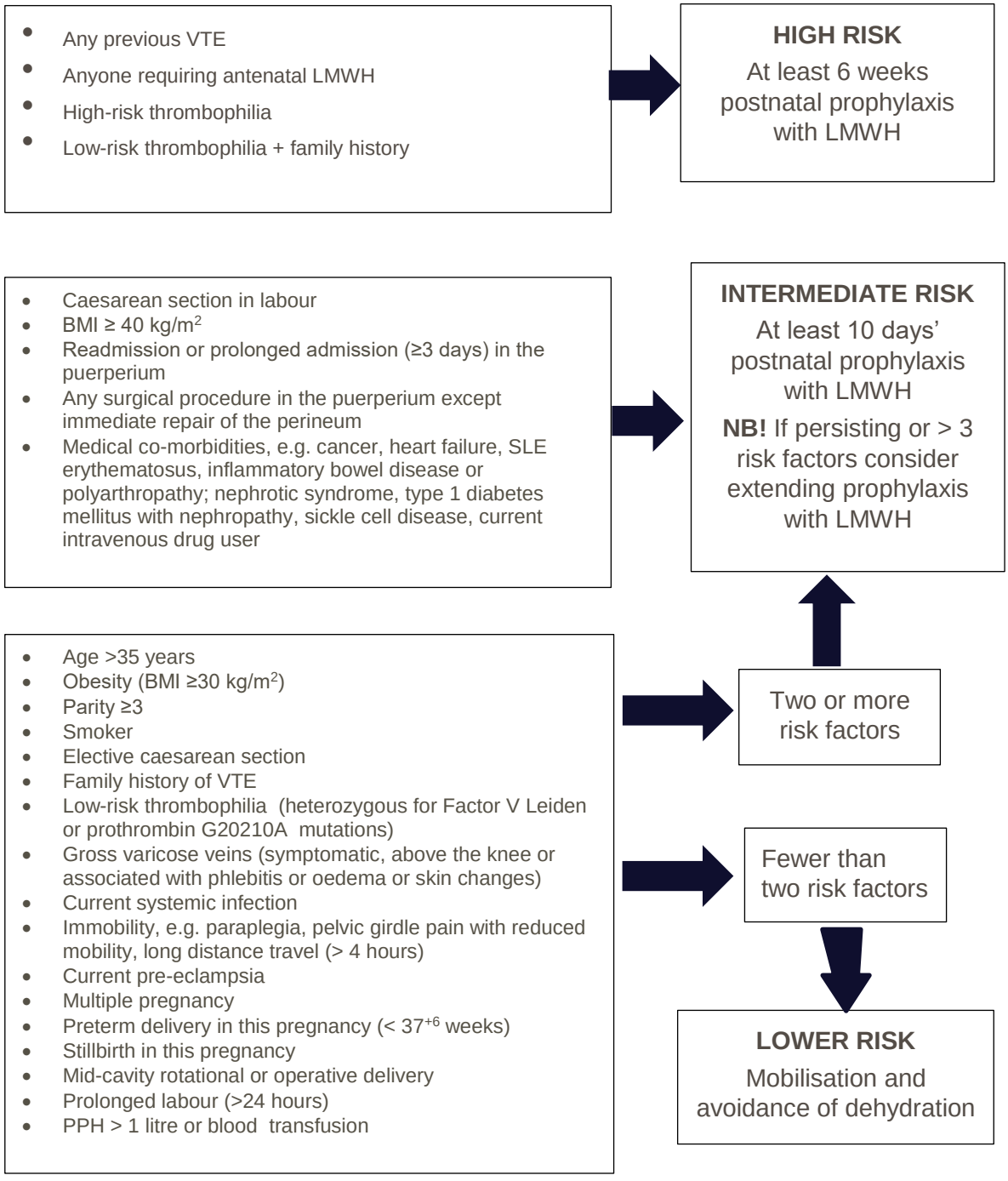


Fig. 2

Postnatal assessment and management
(to be assessed in delivery suite)



Risk assessment scoring for VTE (RCOG)

- If total score ≥ 4 antenatally, consider thromboprophylaxis from the first trimester.
- If total score 3 antenatally, consider thromboprophylaxis from 28 weeks.
- If total score ≥ 2 postnatally, consider thromboprophylaxis for at least 10 days.
- If admitted to hospital antenatally, consider thromboprophylaxis.
- If prolonged admission (≥ 3 days) or readmission to hospital within the puerperium consider thromboprophylaxis.

For patients with an identified bleeding risk, the balance of risks of bleeding and thrombosis should be discussed in consultation with a haematologist with expertise in thrombosis and bleeding in pregnancy

Risk factor scorecard for VTE:

Pre-existing risk factors	Tick	Score
Previous VTE (except a single event related to major surgery)		4
Previous VTE provoked by major surgery		3
Known high-risk thrombophilia		3
Medical comorbidities e.g. cancer, heart failure; active systemic lupus erythematosus, inflammatory polyarthropathy or inflammatory bowel disease; nephrotic syndrome; type I diabetes mellitus with nephropathy; sickle cell disease; current intravenous drug user		3
Family history of unprovoked or estrogen-related VTE in first-degree relative		1
Known low-risk thrombophilia (no VTE)		1[a]
Age (> 35 years)		1
Obesity		1 or 2[b]
Parity ≥ 3		1
Smoker		1
Gross varicose veins		1
Obstetric risk factors	Tick	Score
Pre-eclampsia in current pregnancy		1
ART/IVF (antenatal only)		1
Multiple pregnancy		1
Caesarean section in labour		2
Elective caesarean section		1
Mid-cavity or rotational operative delivery		1
Prolonged labour (> 24 hours)		1
PPH (> 1 litre or transfusion)		1
Preterm birth < 37+0 weeks in current pregnancy		1
Stillbirth in current pregnancy		1
Transient risk factors	Tick	Score
Any surgical procedure in pregnancy or puerperium except immediate repair of the perineum, e.g. appendectomy, postpartum sterilisation		3
Hyperemesis		3
Ovarian hyper stimulation syndrome (first trimester only)		4
Transient risk factors	Tick	Score
Current systemic infection		1
TOTAL		

[a] If the known low-risk thrombophilia is in a woman with a family history of VTE in a first-degree relative postpartum thromboprophylaxis should be continued for 6 weeks.

[b] BMI ≥ 30 = 1; BMI ≥ 40 = 2

Labour and delivery:

- Discontinue SC LMWH at least 12 hours prior to delivery if predictable (elective induction or elective caesarean section)
- If 24-36 hours without anticoagulant is undesirable due to high VTE risk, consider unfractioned heparin (UFH) which can be discontinued 4 – 6 hours prior to delivery

After delivery:

- Heparin regime (SC LMWH, IVI UFH, or SC UFH) should be restarted 12 hours after caesarean section or 6 hours after vaginal birth, assuming that significant bleeding hasn't occurred.
- In most cases, LMWH (1mg/kg BD) can be initiated.
- If warfarin is selected, the patient should receive both warfarin and heparin for at least 5 days. Heparin should only be stopped once INR has been in therapeutic range (INR 2-3) for 2 consecutive days. Warfarin is safe for breast-feeding

Length of therapy:

- Total length of anticoagulant therapy (pregnancy and postpartum) should be at least 6 months (of which 6 weeks postpartum) for women whose risk for VTE were transient (pregnancy and caesarean delivery).
- Patients with persistent factors for VTE may require a longer duration of therapy
- Warfarin, LMWH, Fondoparinux (Arixtra®) and UFH are safe to use in breastfeeding mothers. The oral direct thrombin and Factor Xa inhibitors should be avoided.

Recommended dosages of LMWH thromboprohylaxis

Weight (kg)	Dosage
<50	Enoxaparin (Clexane®) 20 mg once daily Dalteparin (Fragmin®) 2500 units daily
50 - 90	Enoxaparin (Clexane®) 40 mg once daily Dalteparin (Fragmin®) 5 000 units daily Nadroparin (Fraxiparine®) 2 850 units daily
91 - 130	Enoxaparin (Clexane®) 60 mg once daily Dalteparin (Fragmin®) 7500 units daily
131 - 170	Enoxaparin(Clexane®) 80 mg once daily Dalteparin (Fragmin®) 10 000 units daily
>170	Enoxaparin (Clexane®) 0.6 mg/kg once daily Dalteparin (Clexane®) 75 units/kg once daily

References

1. Adam, S. & Soma-Pillay, P. 2018. Obstetric Essentials. 3rd Edition p 83-84. University of Pretoria
2. RCOG Green Top Guideline (2015) No 37a. Reducing the Risk of Venous Thromboembolism during Pregnancy and the Puerperium
3. E Schapkaitz, P R de Jong, B F Jacobson, H R Büller. Recommendations for thromboprophylaxis in obstetrics and gynaecology. South African Journal of Obstetrics and Gynaecology, May 2018, Vol. 24, No.1 p 27 – 31

Authorship

These guidelines were drafted by a clinical team from Mediclinic and were reviewed by a panel of experts from SASOG and the BetterObs™ clinical team in 2019 and revised by the scientific committee of BetterObs™ in 2023. All attempts were made to ensure that the guidance provided is clinically safe, locally relevant and in line with current global and South African best practise. Succinctness was considered more important than comprehensiveness.

All guidelines must be used in conjunction with clinical evaluation and judgement; care must be individualised when appropriate. The writing team, reviewers and SASOG do not accept accountability for any untoward clinical, financial or other outcome related to the use of these documents. Comments are welcome and will be used at the time of next review.

Released on 2022 08 01

History and version control

Author	Version	Details of update	Effective date
Cape Gate Obstetrician Working Group	1	Initial Release	2017 01 01
External Expert Obstetrician	1.1	Validated	2017 01 01
A. Hall	1.2	Rebranded to Clinical Guideline Edited and all drugs names changed to active ingredients	2018 10 01
SASOG Scientific Committee Dr C Groenewald	2.1	Reviewed and no change	22 08 01

Approved by

Department/ Area/ Group/ Forum	Representative name	Signature	Designation	Date
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