



VTE CHECKLIST

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Learning Objectives

- To perform risk assessment for VTE among obstetric patients – at every encounter, admission and after delivery
- To learn to use the assessment checklist (latest update)
- Appropriate prophylaxis after assessment– agents, duration

Lecture Outline

- ❖ Assessment during antenatal and postnatal
- ❖ Risk factors (Antenatal and Postnatal)
- ❖ Checklists
 - ❖ Latest checklist
 - ❖ Old vs new checklist

Penilaian Semasa Antenatal

- Semua wanita perlu menjalani pemeriksaan untuk mengesan risiko VTE semasa:
 - a) Pra-kehamilan
 - b) Awal kehamilan
 - c) Setiap kemasukan ke wad
- Penilaian yang dilakukan perlu dicatat dan direkod.
- Apabila perlu, *thromboprophylaxis* semasa antenatal perlu dimulakan mengikut jadual.

Penilaian Semasa Antenatal (sambungan)

- Wanita yang menerima *thromboprophylaxis* semasa antenatal perlu dinasihatkan untuk berhenti mengambil ubat jika berlaku pendarahan dari vagina atau jika proses kelahiran bermula, dan perlu mendapatkan nasihat doktor serta merta.
- Agen pilihan ialah LMWH

Penilaian Semasa Postnatal

- Semua wanita postpartum perlu diperiksa untuk mengesan risiko VTE. Penilaian perlu direkodkan.
- Galakkan pergerakan (*encourage ambulation*)
- Elakkan dehidrasi
- LMWH ialah agen pilihan
- LMWH & warfarin adalah selamat digunakan semasa menyusukan bayi.

Faktor risiko VTE

VERY HIGH RISK

- Recurrent VTE associated with either antithrombin deficiency or antiphospholipid syndrome, who will often be on long-term oral anticoagulation

High Risk

- Original VTE was unprovoked, idiopathic or estrogen-related;
- Has other risk factors eg family (1st degree relatives) history of VTE
- Thrombophilia

Faktor risiko VTE

- BMI >30kg/m²
- Smoker
- Current systemic infection
- Immobility including long distance travel, SPD, paraplegia
- Pre-eclampsia
- Dehydration/ hyperemesis/ OHSS
- ART

Additional postnatal risk factors:

- LSCS
- Mid-cavity rotational operative delivery
- Any surgical procedure in puerperium
- Prolonged labour (>24hr)
- PPH >1L or requiring blood transfusion

Assessment Checklist

- VTE checklist

Faktor risiko VTE

- Faktor yang sedia wujud sebelum kehamilan (Pre-existing risk factors)
- Faktor risiko obstetrik (Obstetric risk factors)
- Faktor risiko sementara (Transient risk factors)

Scoring system

1) Pre-existing risk factors

Risk factors	Score
Previous VTE	4
High-risk thrombophilia (anti-thrombin, protein C, protein S deficiency)	3
Medical comorbidities e.g. cancer, heart failure, active SLE, nephritic syndrome, Type 1 DM with nephropathy, current IV drug user, TB, thalassemia major or intermedia, post splenectomy	3
Obesity BMI ≥ 40 kg/m ²	2
Obesity BMI 30-39 kg/m ²	1
Family history of VTE	1
Low-risk thrombophilia (Factor V Leiden, High Factor VIII)	1
Current smoker (≥ 10 /day)	1

2) Obstetric risk factors

Risk factors	Score
All caesarean sections (both Emergency & Elective)	2
Pre-eclampsia	1
IVF (1 st trimester only)	1
Mid-cavity or rotational operative delivery	1
Prolonged labour >24hr	1
PPH of >1L or requiring blood transfusion	1
Stillbirth (current)	1

3) Transient risk factors

Risk factors	Score
Surgical procedures (excluding episiotomy, 1 st & 2 nd degree perineal repair, ERPOC)*	4
Hyperemesis gravidarum/OHSS*	4
Systemic infection / infection requiring IV antibiotics	1
Immobility, dehydration	1
Admission beyond 3 days	1
Non-stop long distance travel (>4 hrs)	1

* thromboprophylaxis cover is advised until the patient has sufficiently recovered from surgery or her signs and symptoms of hyperemesis gravidarum or OHSS

Score summary

Period	Score	Duration of thromboprophylaxis
Antenatal	≥ 4	Consider giving from 1 st trimester up to 6 weeks postnatal (up to 6 weeks postnatal if there is a single risk with a score of 4. If a combination score of ≥ 4 , then give up to 3 weeks postnatal then to be reviewed by an O&G specialist to decide if a further 3 weeks of prophylaxis is warranted)
Antenatal	3	Consider prophylaxis from 28 weeks gestation till 3 weeks postnatal
Postnatal	2	Consider prophylaxis for 10 days
Postnatal	>2	Consider prophylaxis for 10 days or longer, specialist to decide

All antenatal and postnatal patients, even those considered low risk should be counselled on VTE prevention and recognition of VTE signs & symptoms

Anticoagulant – choices and dosage

*LMWH is anticoagulant of choice

Weight	Enoxaparin (Clexane)	Tinzaparin (Innohep)	S/C Heparin
<50 kg	20mg OD	3500 units OD	5000 units BD
50-90 kg	40mg OD	4500 units OD	7500 units BD
91-130 kg	60mg OD	7000 units OD	Insufficient evidence of efficacy
131-170 kg	80mg OD	9000 units OD	Insufficient evidence of efficacy

Difference between previous and latest VTE checklist

Differences	2015	2017
Risk factor	Age, Parity Preterm labour, varicose veins Multiple pregnancy, ART, preterm birth EL LSCS (score:1)/ EM LSCS (score:2) Hyperemesis (score:3) Not included in scoring before	No longer included in the scoring Both given score of 2 Hyperemesis (score:4) Admission beyond 3/7 Non-stop long distance travel
Duration of thromboprophylaxis esp after delivery	Throughout ANC until 6 weeks postnatal (≥ 4 current risk factors not include prev VTE and thrombophilia) From 28 th week gestation until 6 weeks postnatal (3 risk factors not include prev VTE and thrombophilia)	From 1 st trimester until 6 weeks postnatal (ANC single risk score of 4) From 1 st trimester until 3 weeks postnatal (ANC risk score combination of ≥ 4) From 28 th week gestation until 3 weeks postnatal (ANC score of 3)

Summary

- All women (antenatal & postnatal) must be assessed for VTE risk, including at every encounter or admission
- All assessment must be documented
- Actions taken based on VTE score



Thank you