HEALTH HOLDING

HAFER ALBATIN HEALTH CLUSTER
MATERNITY AND CHILDREN HOSPITAL

Department:	Provision of Care		
Document:	Multidisciplinary Policy and Procedure		
Title:	Venous Thromboembolism Risk Assessment		
Applies To:	All Health Care Professionals		
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1. PURPOSE:

1.1 Aims to ensure that all women who need antenatal and postnatal receive the best evidence-based care consistent with RCOG guidelines (2015) and Quality Standards
To enable healthcare practitioners to identify patients at risk of developing VTE and select the appropriate therapy, thus reducing the incidence of VTE and the associated mortality and morbidity.

2. DEFINITONS:

2.1 Antiembolism Stockings (AES) — stockings providing graduated circumferential compression from the distal to the proximal regions of the leg, they are specifically designed to reduce the risk of DVT.
2.2 Body Mass Index (BMI) - a measure of body mass calculated on height and weight: Thrombosis risk increases with a BMI > 30 kg/m2)
2.3 Deep Vein Thrombosis (DVT) — a thrombus or blood clot partially blocking the deep veins (usually in the lower limb or pelvis).
2.4 Hormone Replacement Therapy (HRT) — system of medical treatment for surgically menopausal, perimenopausal and, to a lesser extent, menopausal women
2.5 Intermittent Pneumatic Compression Devices (PC Devices) — inflatable garments applied to the foot or the leg which intermittently inflate and deflate enhancing venous return and reducing the risk of DVT
2.6 Low Molecular Weight Heparin (LMWH) - a class of anticoagulation medication used in the prevention and treatment of blood clots.
2.7 Major bleeding - A bleeding event that leads to one or more of the following:
- 2.7.1 Death
- 2.7.2 A decrease of hemoglobin concentration of >= 2g/dl
- 2.7.3 Transfusion of >=2 units of blood
- 2.7.4 Bleeding into a retroperitoneal, intracranial or intraocular site
- 2.7.5 A serious or life threatening clinical event
- 2.7.6 A surgical or medical intervention

2.8 Mechanical Prophylaxis - Antiembolism stockings or intermittent pneumatic compression devices(IPC)
2.9 Estrogen Containing Oral Contraceptive Pill (COCP)
2.10 Pulmonary Embolism (PE) — a blood clot blocking the pulmonary arteries
2.11 Pulmonary Hypertension (PI-IT) — abnormally elevated blood pressure within the pulmonary circuit, a severe consequence of PE associated with significant morbidity and mortality.
2.12 Renal failure - an estimated glomerular filtration rate (eGFR) of < 30 ml/min/l .73m2
2.13 Unfractionated Heparin (UFH) - the drug of choice for thromboprophylaxis in patients with renal failure or in patients where rapid reversal of indication may be indicated.
2.14 Venous Thromboembolism (VTE) — the blocking of a blood vessel by a blood clot. It includes both DVT and PE.
2.15 RCOG — The Royal College of Obstetricians and Gynecologists
2.16 ESR — Essential Safety Requirement

3. POLICY:

3.1 Patients at risk for developing venous thromboembolism are identified and managed.
3.2 Covers all women who need antenatal and postnatal receive the best evidence based care.
3.3 Enable healthcare practitioners to identify patients at risk of developing VTE and select the appropriate therapy thus reducing the incidence of VTE and the associated mortality and morbidity
3.4 All relevant healthcare professionals at MCH Hospitals who are involved in VTE risk assessment, and the prescription and administration of pharmacological and mechanical thromboprophylaxis.
3.5 This standard is Not Applicable in Pediatric Hospitals (pediatric group).
3.6 Patients are screened for the risk of developing venous thromboembolism Form used for VTE screening should include all identified risk factors and the calculation of these risks result in adequate treatment

4. PROCEDURE:

4.1 **RISK ASSESSMENT**: All women who need antenatal and postnatal care will be assessed by admitting physician for their risk of VTE and bleeding using the VTE risk assessment tool as appropriate. The risk assessment will take place on admission or at the antenatal clinic and post delivery

4.1.1 All women should undergo a documented assessment of risk factors for VTE in early pregnancy or before pregnancy. All pregnant women should have a documented VTE risk assessment at the booking appointment whilst the comprehensive history is being taken, through a comprehensive clinical assessment.
4.1.2 Repeat VTE risk assessment if a patient is admitted to the hospital for any reason or develops other inter-current problems during pregnancy and postnatal period.
4.1.3 All women require VTE risk assessment following delivery and before discharge; and arrangements made for subcutaneous low molecular weight heparin (LMWH) prescription and administration (usually by the woman herself) in the community where necessary.
4.1.4 Midwives and doctors should be alert to changes in the woman's situation and that her risk status may change several times during the course of the pregnancy and the postnatal period
4.1.5 Body mass index must be calculated at booking visit and documented in the Antenatal Care Record. As obesity remains the most important risk factor for VTE. The revised RCOG guideline (2015) advises weight specific dosage on thromboprophylaxis.
4.1.6 Vulnerable women, such as those with mental illness or learning disability, are less compliant, and may not be able to follow advice or self-inject, and so require particular care. Antipsychotic medication may be associated with weight gain, which may put the woman at increased risk of thromboembolism
4.1.7 Women are at risk of thromboembolism from the very early pregnancy until the end of the puerperium, and all health professionals must be aware of this. Early pregnancy units and gynecology wards must carry out risk assessment appropriate for pregnant women.
4.1.8 Women with a high or very high risk of VTE should be seen by consultant obstetrician or discussed with consultant obstetrician.
4.1.9 Women who require thromboprophylaxis need an individual management plan at all stages of pregnancy. The patient's healthcare records must clearly document dose and duration of treatment.
4.1.10 Women who are on pharmacological antenatal thromboprophylaxis require anesthetic referral to discuss individual plans for intrapartum and delivery analgesic options.
4.1.11 Women who fall in the 'very high-risk group' require management by a specialist multidisciplinary team including hematologist, obstetrician, midwife and anesthetist.
4.1.12 Women at high risk of VTE in pregnancy, such as those with previous VTE, should be offered prepregnancy counseling and a prospective management plans for thromboprophylaxis in pregnancy.

4.1.13 Women who become pregnant before receiving such counseling should be referred to a consultant obstetrician or expert in thrombosis in pregnancy early in pregnancy.

4.1.14 Women with a previous non-estrogen-related VTE provoked by a minor risk factor should undergo testing for thrombophilia, as this will influence management and decisions regarding thromboprophylaxis antenatally.

4.1.15 Low molecular weight heparins (LMWH) are the agents of choice for antenatal thromboprophylaxis. All pregnant women, at risk of VTE, should be offered LMWH, unless contraindicated. These are at least as effective as and safer than unfractionated heparin.

4.1.16 The use of aspirin is not recommended for VTE prophylaxis in any patient group.

4.1.17 Regardless of their risk of VTE, all women should be encouraged to mobilize during labor and postnatal. Dehydration should be avoided.

4.1.18 Elective induction of labor may be indicated in some women (particularly those on high-dose prophylactic or treatment doses of LMWH) to help plan thromboprophylaxis around delivery

4.1.19 Women receiving LMWH antenatally should usually continue prophylactic doses of LMWH until 6 weeks postnatal but a postnatal risk assessment should be made.

4.1.20 If they are receiving long-term anticoagulation with warfarin, this can be started when the risk of hemorrhage is low.

4.1.21 Both warfarin and LMWH are safe when breastfeeding. Women should be repeatedly assessed for risk factors for VTE if they develop inter-current problems or require surgery or readmission in the puerperium

4.1.22 All patients assessed to be at risk of VTE must be prescribed pharmacological prophylaxis in accordance with RCOG guideline (2015) unless contraindicated

4.1.23 Treatment must continue accordance with RCOG guideline (2015)

4.1.24 At risk, medical patients contraindicated for pharmacological prophylaxis must have mechanical prophylaxis.

4.1.25 All patients should be adequately hydrated according to their clinical condition.

4.1.26 All patients should be mobilised as early as possible within the limitations of their clinical condition.

4.1.27 Patients diagnosed with a DVT or PE should be treated in accordance with the treatment guidelines.

4.2 Patients and their careers must be given written and verbal information on VTE on admission and as part of the discharge process. Information should include the risk of VTE, methods of prevention and signs and symptoms of DVT and PE. There must be clearly documented evidence in the patient's medical record that this information has been provided.

5. MATERIALS AND EQUIPMENT:

5.1 N/A

6. RESPONSIBILITIES:

6.1 Nurses
6.2 Pharmacist
6.3 Physician
6.4 Head of the Department
6.5 VTE Committee Chairman
6.6 Medical Director

7. APPENDICES:

7.1 Training Requirements
7.2 Monitoring compliance with procedural documents
7.3 Obstetric thromboprophylaxis risk assessment and management

8. REFERENCES:

8.1 RCOG (Royal College of Obstetricians and Gynecologists) Green-top Guideline No. 37a
8.2 Saudi Central Board for Accreditation of Healthcare Institutions (CBAHI) Third Edition
8.3 Venous Thromboembolism: reducing the risk: Reducing the risk of venous Thromboembolism (deep vein thrombosis and pulmonary embolism) in patients admitted to hospital: NICE Clinical Guideline 92, Jan 2010
8.4 Venous Thromboembolism Prevention Quality Standard: NICE, June 2010

9. APPROVALS:

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Appendix 7.1: Training Requirements

	Staff Function	Training Needs	How Delivered
1	Staff who have general (none specific) role in delivery of care to patients	General Awareness	Posters/leaflets/ MOH publicity
2	Staff who deliver care to patients	General Awareness Fitting of Graduated Compression Stockings/intermittent pneumatic device (PC) On-going care of patient wearing GCS /IPC	As above PLUS Local Induction
3	Registered Staff who deliver care to patients	General Awareness VTE disease process Contraindications to GCS IIPC Measuring and fitting of Graduated Compression Stockings (GCS) On-going care of patient wearing GCS/IPC Contraindications to Heparin /LMWH Administration of Heparin /LMWH	As above PLUS Local Induction
4	Medical staff	General Awareness VTE disease process VTE risk assessment Long term effects of VTE Contraindications to Mechanical device Alternative methods of Mechanical compression. Contraindications to heparin/LMWH Prescribing heparin/LMWH Ongoing care of patients on heparin/LMWH	As above PLUS Induction.

APPENDIX 7.2: Monitoring Compliance with Procedural Documents

MONITORING COMPLIANCE				
Criteria	**Monitoring**	**Who**	**Frequency**	**How reviewed**
All patients admitted to hospital as Inpatients or Day cases will have a VTE Risk Assessment	Monthly audit using pre-defined VTE Risk Assessment form	Each specialty Head, clinical audit and lead by the VTE task force	Monthly	Report sent to VTE commitment regional for recommendations and action plans. Action plans and recommendations reviewed by quality committee Compliance with monthly program monitored by clinical audit
All patients with hospital acquired VTE (within 1 month of admission) to have a RCA undertaken	Case notes are located and reviewed to identify if the VTE was avoidable	Feedback letters sent to Primary Clinician to complete.	Reviewed on an individual case basis	Each outcome is shared with VTE task, quality department and fed back to Regional VTE committee via Medical Director.
Patients admitted at risk for VTE will have care according to the international guidance	Audit of compliance with VTE prophylaxis	Each specialty Head, clinical audit and lead by the VTE task force	Monthly	Report reviewed by VTE task and results disseminated to Regional VTE committee via Clinical Directors

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This document will be monitored to ensure it is effective and to assurance compliance

Appendix 7.3 Obstetric Thromboprophylaxis Risk Assessment