CONTRAINDICATIONS FOR LMWH

- Active antenatal and post-partum bleeding.
- Woman considered having high risk of bleeding (for example, placenta praevia).
- Woman with coagulation impairment (von Willebrand disease, haemophilia or acquired coagulopathy).
- Thrombocytopenia (<75,000).
- Renal disease (FG < 30 mL/min/1.73m²) or severe liver disease (prolonged TP or oesophageal varices).
- Uncontrolled hypertension (SBP > 200 mmHg or DBP > 120 mmHg).

PERIPARTUM MANAGEMENT

LMWH with bleeding or dynamic
- Suspend LMWH
LMWH at therapeutic dose
- LRA after > 24 hours since last dose
LMWH at prophylactic dose
- LRA after > 12 hours since last dose
- Suspend UFH 4-6 hours before or Protamine sulphate
Unfractionated Heparin (UNH)
- LRA after > 12 hours since last dose
- Suspend UFH 4-6 hours before or Protamine sulphate
Start up LMWH again after birth
- >12-24 hours post-apartum and at least 6 hours after removing catheter, if there is no bleeding or risk of
ASA at low dose
- Consider suspending 24 hours before birth

LMWH AVAILABLE AT HOSPITAL CLINICO UNIVERSITARIO "LOZANO BLESA"

<table>
<thead>
<tr>
<th>Weight (Kg)</th>
<th>Enoxaparin (Lovenox®)</th>
<th>Bemiparin (Hibor®)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;50</td>
<td>20 mg / 24 h</td>
<td>2500 U / 24 h</td>
</tr>
<tr>
<td>50 - 90</td>
<td>40 mg / 24 h</td>
<td>3500 U / 24h</td>
</tr>
<tr>
<td>91- 130</td>
<td>60 mg / 24 h or 40 mg / 12 h</td>
<td>5000 U / 24h</td>
</tr>
<tr>
<td>Intermediate dose (50 - 90 Kg)</td>
<td>40 mg / 12 h</td>
<td>- - - - -</td>
</tr>
<tr>
<td>Therapeutic dose</td>
<td>1 mg/kg / 12 h or 1.5mg / 24 h</td>
<td>115 U/kg / 24h</td>
</tr>
</tbody>
</table>

Author’s note: bemiparin every 12 hours is not included in the SmPC

REFERENCES


ABBREVIATIONS

APA: Antiphospholipid antibodies
ASA: Acetylsalicylic Acid
CVA: Cerebrovascular accident
FH: Family History
LRA: Local regional anaesthesia
RF: Risk factors
PH: Personal History
RM: Recurrent Miscarriage
AT: Antithrombom
VKA: Vitamin K antagonists
IUGR: Intrauterine growth retardation
GA: Gestational age
VTE: Venous Thromboembolism
ET: Pulmonary thromboembolism

CONTRAINDICATIONS PERI partum

- LMWH entire pregnancy + 6 weeks postpartum (VTE due to transient RF; only LMWH post-partum)
- Antenatal surveillance - LMWH if > 2 additional RF.

 hos pital Clinico Universitario Lozano Blesa ZARAGOZA

Junio 2012

Dra. Ana Cristina Lou
Obstetrics Department

Dra. Rosa Cornudella
Hematology Department
**ASSESSMENT OF INDIVIDUAL RISK**

- Type of thrombophilia
- Personal or family history of VTE disease
- History of gestational vascular complications
- Antenatal and postnatal risk factors

**INDICATIONS TO REQUEST STUDY OF THROMBOPHILIA**

VTE that appears before the age of 50, idiopathic or recurrent. VTE of atypical location. Recurrent superficial thrombophlebitis in absence of neoplasia. Gestational vascular complications (RM, late foetal loss, pre-eclampsia, IGR). 1st degree family history of arterial or VTE disease <50 year.

*Plasma thrombophilia is recommended 2-3 months postpartum, instead of during pregnancy.*

**THROMBOSIS**

APS with

**OBSTETRIC**

- Recurrent foetal loss or late foetal loss
- History of preeclampsia or high risk of PE
- IGR
- Inherited
- Acquired (Obstetric APS)

**APS without clinical symptoms**

- Abstinence/strict control or ASA

**OTHER**

- Recurrent miscarriage (= EG 10)
- Late foetal losses, KR, pre-eclampsia
- Previous arterial thrombosis
- Previous venous thrombosis
- Puerperium of APS

Individual management, according to clinical or immunological status. Active participation of patient in therapeutic strategy decision in own individual case. Multidisciplinary control by experts in APS.

**THROMBOPHILIA WITHOUT PREVIOUS EPISODE**

- At deficiency
- FII heterozygotes
- FV heterozygotes
- Protein S or Protein C deficiency

- Severe Ovarian Hyperstimulation syndrome
- Other diseases (lupus, drapanocytosis, cancer,...)
- Immobilisation due to hospitalisation
- Other (lupus, drapanocytosis, cancer,...)

- Prophylactic LMWH during admission and maintain it for 1st trim.
- Evaluation by experts if prenatal LMWH is needed
- Consider prophylactic LMWH if admission + 2 RF (until resolution of symptoms)

- Prophylactic LMWH 6 weeks postnatal
- Graduated compression stockings
- Start again VKA

**THROMBOPHILIA WITH PREVIOUS EPISODE OF VTE**

- Recurrent
- Patient with OAT
- AT deficiency and APS
- Other thrombophilias or FH of VTE
- Not provoked or idiopathic
- Related to oestrogens

- Suspends anticoagulants
- Therapeutic LMWH for entire pregnancy
- Haemostatic Control
- LMWH** entire pregnancy
- Graduated compression stockings
- Haemostatic Control

**MANAGEMENT OF ACUTE EPISODE OF VTE IN PREGNANCY**

- Treatment must be begun faced with clinical suspicion.
- Full anticoagulation with adjusted doses of LMWH for at least 3 months after the episode occurs, maintaining the treatment throughout the entire pregnancy and up to 6 weeks after birth.

**THROMBOPHILIA WITHOUT PREVIOUS EPISODE OF VTE**

- Class I
- FV homozygotes
- FII heterozygotes
- Combined defects

- Other thrombophilias or FH of VTE

- Evaluate prophylactic LMWH if additional RF.
- Haemostatic Control

**MANAGEMENT OF EXPECTANT MOTHER WITH AN ANTIPHOSPHOLIPID SYNDROME**

- Puerperium of APS

- Prophylactic LMWH 4-6 weeks postpartum

Individual management, according to clinical or immunological status. Active participation of patient in therapeutic strategy decision in own individual case. Multidisciplinary control by experts in APS.

**WITH PREVIOUS EPISODE OF VTE**

- Transient risk factor not present in pregnancy

- Evaluate prophylactic LMWH if additional RF.
- Haemostatic Control

**ANTIETJNENT RISK SITUATIONS**

- Intercurrent surgical procedure
- Other diseases (lupus, drapanocytosis, medical comorbidity, cancer,...)
- Complications of pregnancy

- Evaluation by experts if prenatal LMWH is needed
- Consider prophylactic LMWH if admission + 2 RF (until resolution of symptoms)

- Prophylactic LMWH at least 7 days postpartum

**HISTORY OF PREECLAMPSIA OR LMWH POSTPARTUM 4-6 WEEKS**

**HIGH RISK**

- VTE disease due to transient RF not present during pregnancy
- BMI >40
- Other diseases (medical comorbidity, lupus, drapanocytosis, cancer,...)
- Obstetric hysterecotomy

- Evaluation of risk factors:
  - Age >35 years
  - BMI >30
  - Caesarean section
  - Surgical procedure in puerperium
  - Immobility > 4 days before caesarean section
  - Immobility postpartum (paraplexia, traumatical lesion in lower limbs,...)
  - Multiparity ≥ 3
  - Concurrent systemic infection
  - Pre-eclampsia
  - Macroscopic veins
  - Blood loss > 1 L or blood transfusion

- Consider prophylactic LMWH 7 days if >2 RF

**INTERMEDIATE RISK**

- VTE disease with transient RF
- Patients with VKA prior to pregnancy

**LOW RISK**

- Puerperium without complications
- Avoid dehydration

**NOTE:** Patients selected with persistence of RF, consider prolonging thromboprophylaxis until 6 weeks post-partum