BLEEDING DISORDERS in WOMEN

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BLEEDING DISORDERS in WOMEN

- Physiopathology: which bleeding disorders can be seen in women?
- Clinics: consequences of bleeding disorders in women
- Therapeutic approaches
Physiopathology: which bleeding disorders can be seen among women?

- *Congenital*
  - Primary haemostasis disorders
    - Congenital platelet defects
      - Glanzmann disease, Bernard-Soulie disease, other
      - Congenital thrombocytopenia: amegacaryocytic, absent radii…
    - Willebrand disease
Physiopathology: which bleeding disorders can be seen among women?

- **Congenital**
  - Primary haemostasis disorders
  - Coagulation defects
    - Homozygous or compound heterozygous for rare coagulation disorders: F VII, FX, FV, F II, F XI, afibrinogenemia
    - Hemophilia (rare): homozygous, Turner + hemophilia
    - Hemophilia carriers: lyonisation
- Lyonisation refers to random inactivation of an X-chromosome in the cells of females.
- Due to lyonisation, adult females may have low anti-hemophiliac factor level and suffer from bleeding disorders.
- Hemophiliac daughters are more common than they once were, as improved treatments for the disease have allowed more hemophiliac males to survive to adulthood and become parents.
WILLEBRAND DISEASE: AUTOSOMATIC DOMINANT
RARE COAGULATION DISORDERS:
AUTOSOMATIC RECESSIVE
Physiopathology: which bleeding disorders can be seen among women?

- **Congenital**
  - Primary haemostasis disorders
  - Coagulation defects

- **Acquired**
  - All acquired haemostasis disorders can be seen:
    - ITP, acquired hemophilia or willebrand, diseases of liver or kidneys, DIC, drug-induced disorders
  - They may rise the same problems
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Clinics: consequences of bleeding disorders in women

- Problems seen equally among men and women
- Specific problems
  - Menorrhagia, pregnancy
Symptoms in factor VII deficiency males vs females
### F VII DEFICIENCY: Clinical picture

<table>
<thead>
<tr>
<th>Clinical picture</th>
<th>N</th>
<th>%</th>
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<tbody>
<tr>
<td>Asymptomatic</td>
<td>23</td>
<td>10.8</td>
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<td>Symptomatic</td>
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<tr>
<td>Epistaxis</td>
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<td>39.6</td>
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<td>Easy Bruising</td>
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<td>29.2</td>
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<tr>
<td>Menorrhagia</td>
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<td>Gum Bleeding</td>
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<td>Hemarthrosis</td>
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<td>Muscle Hematomas</td>
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<tr>
<td>GI Bleeding</td>
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<tr>
<td>Thrombotic Episodes</td>
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<td>3.3</td>
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<tr>
<td>CNS Bleeding</td>
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</table>

*From International Registry on F VII*
Symptoms in factor VII deficiency
males vs females after excluding menorrhagia

- % Spt+
- % Spt -
- Total

Males vs Females
The problem of Menorrhagia

- Frequently the main – the alone – symptom
- Raises frequently difficulties concerning
  - Diagnosis
    - When can we consider that menstruation are excessive?
    - Consultation of haematology are not appropriate to speak about menorrhagia
  - Severity
  - Treatment
BLEEDING DISORDERS in WOMEN: The problem of Menorrhagia

- **Diagnosis and severity**
  - Different scores have been proposed
  - Difficult to apply in current practice

- **Evaluation of the consequences could be considered**
  - Subjective consequences: scale as used for pain
  - Biological aspect: ferritinemia, MCV, MCH, anemia
  - Therapeutic aspect: antecedents of transfusion, iron treatment, minor or major surgery (hysterectomy)
• **Pregnancy raises other problems**
  - At least 2 questions from the patient (and the doctors)
    - Is pregnancy possible despite haemorrhagic diathesis?
    - Risk for the baby to have the same pathology
  - The answers depend on the type of pathology
  - Some congenital hemorrhagic disease are associated with recurrent abortion
    - Afibrinogenemia, F XIII deficiencies
  - **Risks for the newborn** in case of severe deficiencies: F VII, F X, F XIII : cord bleeding, cephalhematoma or intracerebral bleeding
Salomon et al. *Blood Coag Fibrinol 2005*

- 85 vaginal delivery and 8 cesarians without substitutive treatment
- 69.4%: no bleeding
- 30.6%: hemorrhage (no correlation with genotype or F XI plasma level)
- Thus the authors do not recommend systematic treatment: on-demand if bleeding occurs
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BLEEDING DISORDERS in WOMEN:
Therapeutic aspects

- **Emergency:**
  - Diagnosis unknown: infusion of platelets and FFP bring all the components necessary to hemostasis
  - Diagnosis is known: infusion of the missing factor
    - Thrombocytopenia, thrombopathy: platelets transfusion
    - Willebrand disease: F W concentrate or desmopressin
    - Afibrinogenemia: fibrinogen concentrate or FFP
    - F II or VII or X: PCC or FFP
    - F IX or F VIII: specific concentrate
    - F V: FFP
    - F XI: Hemoleven™ of FFP
BLEEDING DISORDERS in WOMEN:
Therapeutic aspects

- **Treatment of consequences**
  - Iron therapy, transfusion

- **Specific treatments**
  - Willebrand disease
    - Desmopressin (IV or inhalation)
    - Estrogens increase vWF plasma levels
    - Willebrand factor concentrates
  - Carriers of hemophilia with bleedings: desmopressin
  - Factor XI deficiency: tranexamic acid
  - Factor XIII deficiency: Fibrogammin
BLEEDING DISORDERS in WOMEN:
Therapeutic aspects

- **Non specific treatment**
  - Tranexamic acid can be used in nearly all hemorrhagic diathesis
  - Desmopressin

- **Symptomatic treatments**
  - Menorragia
    - Hormone therapy leading to stop menstruation
  - Pregnancy
    - Rest, prophylaxis
While women are not exposed to hemophilia (with some exceptions), bleeding disorders are frequent in women.

They raise some specific problems, mainly menorrhagia and pregnancy:

- Menorrhagia are frequently very difficult to manage
- For pregnancy, consider the risks of recurrent abortions or hemorrhagic complication for the newborn