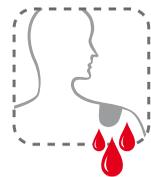


5 signs of bleeding



Easy bruising with indurations



Frequent or prolonged nosebleeds



Heavy menstrual periods



Prolonged bleeding after injury, childbirth and surgery



Prolonged bleeding / mucous membrane bleeding during dental work

« These signs indicate a possible coagulation disorder. To investigate further, please turn the page and use the questionnaire.

www.signsofbleeding.com

Brochures on coagulation disorders are also available for other major medical disciplines

Relevant links to more information on von Willebrand disease and other coagulation disorders

www.wfh.org
www.ehaweb.org
www.esh.org
www.hematology.org
www.allaboutbleeding.com

www.nhlbi.nih.gov
www.ehc.eu
www.hemophilia.ca
www.intreavws.com

Address of local haemophilia center:

We would like to thank the international faculty for essential support:

| | |
|------------------------------|---------------------------------------|
| Dr. Andra James (MD) | Debra Pollard (RN) |
| Dr. Pieter Kamphuisen (MD) | Dr. Kai Leimbach (odont.) |
| Dr. Johannes Rischewski (MD) | Alexandra Eichert-Naumann |
| Dr. Elvira Grandone (MD) | Dr. Hubert K. Hartl (MD) [†] |

Literature:

- ^[1] Plug I, et al. Bleeding in carriers of hemophilia. *Blood* 2006; 108: 52–56
- ^[2] Ingerslev J & Hvid I. Surgery in hemophilia. The general view: patient selection, timing, and preoperative assessment. *Semin Hematol* 2006; 43 (Suppl 1): S23–S26
- ^[3] Srámek A, et al. Usefulness of patient interview in bleeding disorders. *Arch Intern Med* 1995; 155: 1409–1415
- ^[4] Shopnick RI & Brettler DB. Hemostasis: a practical review of conservative and operative care. *Clin Orthop Relat Res* 1996; 328: 34–38
- ^[5] Lee CA, et al. The obstetric and gynaecological management of women with inherited bleeding disorders – review with guidelines produced by a taskforce of UK Haemophilia Centre Doctors' Organization. *Haemophilia* 2006; 12: 301–336



5 signs of bleeding

information about coagulation disorders

surgeons

Identification of a potential coagulation disorder

- Approximately 1% of the general population have an atypical von Willebrand factor gene
- Female carriers of haemophilia A or B have an increased risk of bleeding after trauma and medical interventions^[1]
 - The risk of prolonged bleeding after surgery is 2.5 times higher in carriers than in non-carriers^[1]
- Over 75% of bleeds in patients with severe haemophilia are joint bleeds^[2]
- A simple interview is useful as a screening tool^[3]

It would be prudent to spend 5 minutes on '5 signs' in any of the following situations – these could all indicate a coagulation disorder

- Abnormal bleeding after childbirth, circumcision or at menarche
- Large haematomas resulting from trivial injuries or intramuscular injections
- Intermittent and chronic joint pain

When discussing surgery, ask the patient about other symptoms of potential coagulation disorders. It only takes 5 minutes – better safe than sorry!

5 minutes

5 signs

to be safer

Surgical procedures in patients with coagulation disorders

In patients with untreated coagulation disorders

- Minor procedures can cause prolonged bleeding
This may prolong the procedure, e.g. by obscuring the operative field or may necessitate transfusion
- There is an increased risk of recurrent post-operative bleeding, leading to patient distress and extra demands on staff and resources

Management

- Optimal management should include^[4]
 - A facility equipped with special coagulation laboratory and blood bank
 - A haematologist proficient in post-surgical care of patients with coagulation disorders
 - A surgeon with experience of operating on patients with coagulopathies
- After surgery, close follow-up is recommended to monitor coagulation factor levels and to assess for delayed bleeding complications, such as wound breakdown^[5]

If you suspect a coagulation disorder, please determine the patient's 'bleeding history'



» Bleeding history

For further investigation, please ask these questions:

Medication and treatment

- Are you currently taking or have you recently received
- Antithrombotic medication: aspirin, heparin, clopidogrel, ticlopidine, vitamin-K antagonists (e.g. Marcumar, Warfarin)?
 - Non steroidal anti inflammatory drugs: diclofenac, ibuprofen?
 - Antibiotic medication: penicillin, tetracycline, sulfonamides, fluoroquinolones (e.g. Ciprofloxacin)?
 - Other drugs interacting with the coagulation system: valproic acid, megadoses of vitamin E?
- Have you ever had anaemia that required treatment, or received a blood transfusion?

Coagulation

- Have you ever had a spontaneous nosebleed that either persisted for 10 mins or required medical attention?
- Have you ever experienced prolonged bleeding (duration of 15 mins, or spontaneous recurrence within 7 days) from minor wounds?
- Women only: Have you ever had heavy menses where you needed to change a pad, or a tampon, more than hourly?
- Have you ever experienced heavy, prolonged or recurrent bleeding following a surgical procedure?

Family History

- Can you recall any coagulation disorders among family members (these must be blood relatives)?
- Do any members of your family (blood relatives) regularly experience any of the '5 signs of bleeding'?

If an answer concerning coagulation or family history is positive, consider referring the patient to a haematologist