Vaginal Bleeding

Definition / Supporting Information

Assessing vaginal bleeding depends largely on the age and pubertal status of the patient. Vaginal bleeding in the first week of life may be a physiological response to maternal hormones. Any vaginal bleeding after the first week of life requires thorough assessment. In pubertal girls and young women, bleeding can be caused by disorders affecting the hypothalamic–pituitary–ovarian axis, complications of pregnancy, or local causes.

Keywords / also known as: period, menarche, menstrual

Essential History

Ask about:

- Quantity of bleeding
- Possibility of sexual abuse
- History of trauma (eg, ‘straddle’ injury from bicycle)
- Family history of any kind of bleeding problem
- Fatigue
- If appropriate, menstrual pattern
  - Bleeding between normal periods
  - Previous regular menses
  - Heavy bleeding at menarche
- If appropriate, sexual activity
  - Occasionally, a small amount of bleeding or spotting may follow sexual intercourse
- Pruritus
  - Night-time pruritus may indicate a threadworm infestation
  - Vulvovaginitis especially in prepubertal girls
- Constipation / anal fissure may be confused with vaginal bleeding
- Dysuria
- Participation in sports and other activities
- Medication use
  - Particularly contraceptives, coumarins (eg, Warfarin)

‘Red Flag’ Symptoms and Signs

Ask about:

- Crampy lower abdominal pain
  - Possible ectopic pregnancy
  - Incomplete or spontaneous miscarriage
  - May be associated with recent termination of pregnancy
- Possibility of sexual abuse
  - Careful, non-threatening questioning of the child, parent, or carer may prompt a referral to child protection services for a forensic interview and examination
  - It is usual practice to take a history from the child if old enough, as well as the parent or carer. It is also standard practice to refer to children’s social services when a child or young person makes a disclosure of maltreatment (even though it may not be precise in every detail). See Child maltreatment: when to suspect maltreatment in under 18s [NICE clinical guideline 89].
- Prior need for hospitalisation to control the bleeding
- Other bleeding problems
- If appropriate, possibility of substance use
- If appropriate, sexually transmitted infections and associated symptoms
  - Cramping
  - Vaginal discharge
  - Dyspareunia
- Hypothyroidism
  - More likely to lead to delayed puberty and / or amenorrhoea
- Foul-smelling and bloody discharge
  - Foreign body or retained tampon is likely
  - Necrotic tumours can result in similar bleeding patterns
  - Vaginitis (*Trichomonas vaginalis*)

Look for:

- Any suggestion of sexual abuse
  - Bruises (see Petechiae and Purpura)
  - Vulvar or vaginal bruising or lacerations
  - Hymenal tears
  - Other signs of trauma
    - Consider Female Genital Mutilation (FGM) and assess labia minora, clitoris and clitoral hood, in particular. Look for cuts or pinpricks.
- Foreign body in the vagina
  - Should always be considered, even if no history exists
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- Excoriation, erythema, or a rash in the perineal area
  - Vulvo-vaginitis is a distinct possibility
  - Diarrhoea in the weeks preceding onset of the bleeding suggests vaginitis caused by *Shigella* organisms
  - Group A β-haemolytic streptococcus can also cause vaginitis
  - Consider dermatological conditions such as lichen planus
- Petechiae or numerous bruises
  - Possible coagulopathy
- Enlargement of the thyroid gland

Differential Diagnosis / Conditions

- Physiological
  - Menarche
  - Midcycle spotting associated with ovulation
  - Ovulatory cycles usually do not start until some months or years after menarche
- Precocious puberty
- Dysfunctional uterine bleeding (DUB)
  - Most cases of vaginal bleeding in adolescent girls
  - Diagnosis of exclusion
- Sexually transmitted infection
- Conditions of the reproductive tract
  - Vagina
    - Vaginitis
    - Trauma
    - Foreign body
    - Neoplasia
  - Cervix
    - Cervicitis
    - Ectropion (very common in the younger age-group but very unlikely to cause spontaneous bleeding, more likely to be post-coital)
    - Cervical polyp
    - Neoplasia (extremely unusual <25 years)
  - Uterus
    - Endometritis
    - Endometrial polyp
    - Submucosal leiomyoma (extremely rare in adolescence)
    - Arteriovenous malformation
    - Neoplasia

  - Pelvis
    - Endometriosis (unlikely to cause bleeding; more likely associated with painful but otherwise normal periods)
    - Pelvic inflammatory disease (rare for bleeding to be main presenting symptom; pelvic pain and discharge are more likely)
- Pregnancy complications
  - Spontaneous miscarriage
  - Ectopic pregnancy
  - Retained pregnancy tissue
  - Trophoblastic disease
- Endocrine disorders
  - Isolated premature menarche
    - Episodes of vaginal bleeding without any signs of puberty or evidence of activation of the pituitary–ovarian axis
      - Usually resolves spontaneously
  - Neoplasia (hormone secreting)
- Coagulation disorders
  - von Willebrand's disease
  - Consider if heavy menstrual bleeding since menarche
- Other causes
  - Disorders of platelet function
  - Leukaemia
  - Female Genital Mutilation
  - Hormonal medications
  - Anticoagulants
  - Contraceptive implant
  - Hemangiomas
  - Uretheral prolapse (girls 2-10 years)
    - Afro-Caribbean origin
    - Dusky red, annular mass between labia majora on examination
- Genital warts via vertical transmission or auto-inoculation
- Neonatal
  - Withdrawal of maternal hormones
  - Urate crystals

Investigations

To be undertaken by non-specialist practitioners (eg, General Practitioner (GP) Team):

- Full blood count with indices
- Urinalysis

- Urine pregnancy test
  - Quantitative serum pregnancy test should also be obtained if ectopic pregnancy is suspected
- Cultures in sexually active patients or where there is concern about sexual abuse
  - *N. gonorrhoeae*
  - *C. trachomatis*
  - *T. vaginalis*
  - Bacterial vaginosis
- Tests for coagulation disorders (eg, von Willebrand's disease) if the patient has:
  - Profuse haemorrhage
  - Heavy menstrual bleeding at menarche
  - Family history of bleeding disorders
  - Unexplained heavy vaginal bleeding
- Thyroid function tests

To be undertaken by specialist practitioners (eg, General Paediatric / Paediatric Endocrinology Team(s)) if not already done:

- Transabdominal pelvic sonography if:
  - The uterus is palpable abdominally
  - Ectopic pregnancy is suspected
  - Suspected foreign body (examination under anaesthesia may be required)
- Vaginoscopy and examination under anaesthesia may be indicated in prepubertal girls with frank bleeding to rule out rare conditions such as rhabdomyosarcoma

Treatment Approach

To be undertaken by non-specialist practitioners (eg, GP Team):

- Treat urinary tract infections
  - Usually treated with antibiotics
- Treat sexually transmitted infections in sexually active patients according to culture results, and in accordance with local policies
  - Usually treated with antibiotics
- In Dysfunctional uterine bleeding (DUB):
  - For moderate bleeding (decrease in haematocrit level to < 34%) and / or menses every 1–3 weeks:
    - Oral progesterone only
      - Medroxyprogesterone acetate 2.5 to 10 mg daily for 21 days beginning on day 7 to 28 of cycle, or norethisterone 5 mg 3 times daily for 10 days to arrest bleeding; or to prevent bleeding 5 mg twice daily from day 7 to 28.

        - Combined oral contraceptives (COCs) containing 30 micrograms ethinylestradiol
    - Consider iron supplementation for mild anaemia (haemoglobin 110–120 g/L)
    - Nonsteroidal anti-inflammatory drugs (NSAIDs)
        - Mefenamic acid
        - Ibuprofen
        - Naproxen
        - Tranexamic acid 1 g three times daily for up to 4 days starting from first day of bleeding in combination with NSAIDs (for menorrhagia)
    - The levonorgestrel intra-uterine system (Mirena®) where first-line treatments have failed, or there is a medical contraindication to COC use

To be undertaken by specialist practitioners (eg, General Paediatric / Paediatric Endocrinology / Adolescent Gynaecology Team(s)):

- Removal of foreign body
    - Usually undertaken jointly by paediatric and gynaecology teams
        - Usually requires examination under anaesthesia
- Threatened or spontaneous miscarriage should be managed in the specialist Early Pregnancy Unit outpatient setting
    - A clinician experienced in the management of early pregnancy should be consulted
- For cases of severe prolonged heavy bleeding and decrease in haemoglobin to ≤ 100 g/L:
    - Hospitalisation should be considered
    - Tranexamic acid (IV or oral) should be given
    - Norethisterone 10mg TDS orally can be given for 28 days
    - Alternatively COC (Combined Oral Contraceptives eg, ethinylestradiol with levonorgestrel) for 3–4 days will generally stop the bleeding
    - Patients with significant bleeding should avoid the placebo pills contained in the COC pill packs, and continue continuous COCs until haemoglobin and haematocrit levels begin to normalise
    - Ferrous sulfate with folic acid supplementation
    - Blood transfusion
    - Transabdominal ultrasound scan to assess uterine size and endometrial thickness
    - Dilation and curettage is not indicated (see Heavy menstrual bleeding: assessment and management [NICE guideline NG88])

When to Refer

Refer to specialist practitioners (eg, General Paediatric / Paediatric Endocrinology / Adolescent Gynaecology Team(s)) if:

- The patient is experiencing severe bleeding or initial attempts to control the bleeding by the primary care physician have failed
- Vaginal bleeding appears to be secondary to a chronic illness
- Ultrasound scan shows an abnormality
- Long-term hormonal therapy is required
- Complicated endocrine disorder
- Coagulopathy, especially if causing severe bleeding
- Suspicion of sexual abuse
  - Refer to children's social services (see Child maltreatment: when to suspect maltreatment in under 18s [NICE clinical guideline 89])

When to Admit

- Severe prolonged heavy bleeding accompanied by a decrease in haemoglobin to ≤ 10 g/dL
- Haemodynamic instability

'Safety Netting' Advice

- Pubertal girls and young women with abnormal vaginal bleeding should be advised to maintain a menstrual calendar to facilitate follow-up management
- Pubertal girls and young women with mild bleeding should be re-evaluated in 6–8 weeks
- Pubertal girls and young women with severe bleeding require long-term, close follow-up
- Even when measures succeed in controlling the vaginal bleeding, an appreciable number of pubertal girls and young women will continue to have menstrual abnormalities

Patient / Carer Information

Please note: whilst these resources have been developed to a high standard they may not be specific to children.

- Heavy menstrual bleeding: Information for the public (Web page), NICE guideline NG88, National Institute for Health and Care Excellence
- What causes bleeding between periods? (Web page), the NHS website

Resources

National Clinical Guidance

Heavy menstrual bleeding: assessment and management (Web page), NICE guideline NG88, National Institute for Health and Care Excellence

Child maltreatment: when to suspect maltreatment in under 18s (Web page), NICE clinical guideline CG89, National Institute for Health and Care Excellence

Medical Decision Support

Child Sexual Abuse (Web page), RCPCH Child Protection Companion

Suggested Resources

Please note: these resources include links to external websites. These resources may not have national accreditation and therefore PCO UK cannot guarantee the accuracy of the content.

Tranexamic acid for heavy bleeding during periods (Web page), Medicines for Children

Tranexamic acid for the treatment or prevention of bleeding (Web page), Medicines for Children

Williams CE, Creighton SM, Menstrual disorders in adolescents: review of current practice. Horm Res Paediatr 2012;78(3):135–143 [PubMed]

Jayasingehe Y, Moore P, Donath S, et al . Bleeding disorders in teenagers presenting with menorrhagia. Aust N Z J Obstet Gynaecol 2005;45:439–443 [PubMed]

Creighton SM, Hodes D. Female genital mutilation; what every paediatrician should know. Arch Dis Child 2015 Mar 19. Review [PubMed]

Pillai M, O'Brien K, Hill E. The levonorgestrel intrauterine system (Mirena) for the treatment of menstrual problems in adolescents with medical disorders, or physical or learning disabilities.BJOG. 2010;117:216-221 [PubMed]

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