Menstrual disorders

- Normal range of cycle 23-35/7.
- Menarche range 8-18.
- Menopause average 52y.

DRAFT

Disclaimer:
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References:
1. BMJ Learning, Dr Peter Bowen-Simpkins obstetrician and gynaecologist, London Women's Clinic.
2. pcwhf.co.uk, webinar, Oct 2016.
3. Common Gynaecological Conditions Leading to Referral, Redditch NHS, Oct 2018.
4. NB Medical blog 10 June 2020 Dr Stephanie De Giorgio
5. Dr Diana Mansour & Dr Sarah Gray GPwSI, Oct 2020.
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Neonatal uterine bleeding

- 5% babies.
- Oestrogen from mother go to baby when in utero.
- When delivered, the oestrogen levels fall, which causes oestrogen withdrawal bleeding.
- Days 2-10.

- PV bleeding.
- Nappy stained blood.

- Nil.

- Nil.

Post menopausal bleeding (PMB)

- Defined as bleeding after >12/12 since last period.
- Unscheduled bleeding >3/12 if cyclical HRT or >6/12 for continuous combined HRT, after commencement of treatment is also treated as PMB.

- 2WW.

Post coital bleeding (PCB)

Investigations

- Hx.
  - Length of cycle, duration of bleeding, how heavy is bleeding, post coital bleeding.
  - -Dysmenorrhoea, dyspareunia, any other pain.
  - Contraception and sexual Hx.
  - Risk factors with cervical Ca.
    - Smoking.
    - Immunosuppression.
    - Age at 1st sexual intercourse.
    - Early 1st pregnancy.
    - Number of partners.
    - Hx STI especially chlamydia/herpes.
    - > 3 full term pregnancies.
    - Low socio-economic background.
    - Poor diet.
  - PMH, gynae Hx.
  - Co-morbidities and BMI
  - Urinary symptoms, bowel symptoms.
- Speculum.
  - Looking for ectopy / polyp / contact bleeding / discharge / ulceration / warts / tumour / foreign body
- Swabs.
  - -Screen and test for infection including chlamydia.
- Cytology if due.
- USS.

Management

- 1o care to treat
  - Treat any STI.
  - If no risk factors for cervical Ca and examination normal observation is acceptable within first 3/12.
  - Consider alteration of hormonal contraception.
    - If fails refer as routine to gynaecology.
- Routine gynaecology referral
  - Cervical polyp (if can't remove in 1o care).
  - Bleeding cervical ectropion.
  - All patients ≥45.
  - Patients <45 with persistent (>3/12) consecutive symptoms and/or risk factors for endometrial Ca.
- Urgent colposcopy clinic referral
  - PCB in history of LLETZ or high grade CIN/CGIN (borderline or mild abnormality).

Intermenstrual bleeding (IMB)

- Physiological.
  - Part of her normal cycle, but not being adequately regulated by her hormonal flucuations.
- Iatrogenic.
- Infection.
- Polyps/fibroids.
- Hyperplasia.
  - Hormonal.
  - Enzyme inducers.
- Malignancy.

Investigations

- Hx.
  - Length of cycle, duration of bleeding, how heavy is bleeding, post coital bleeding.
  - Dysmenorrhoea, dyspareunia, any other pain.
  - Contraception and sexual Hx.
  - Risk factors with cervical Ca.
    - Smoking.
    - Immunosuppression.
    - Age at 1st sexual intercourse.
    - Early 1st pregnancy.
    - Number of partners.
    - Hx STI especially chlamydia/herpes.
    - > 3 full term pregnancies.
    - Low socio-economic background.
    - Poor diet.
  - PMH, gynae Hx.
  - Co-morbidities and BMI
  - Urinary symptoms, bowel symptoms.
- Speculum.
  - Looking for ectopy / polyp / contact bleeding / discharge / ulceration / warts / tumour / foreign body
- Swabs.
  - Screen and test for infection including chlamydia.
- Cytology if due.
- USS.

Management

- 1o care to treat
  - Treat any STI.
  - Remove cervical polyp if able (see Cervical polyp EFA).
  - IMB acceptable within first 3/12 of hormonal treatment and Cu IUD.
  - Consider alteration of hormonal contraception.
  - Ectropian, change contraception.
    - If fails refer as routine to gynaecology.
- Routine gynaecology referral
  - Cervical polyp (if can't remove in 1o care).
  - Bleeding cervical ectropion.
  - All patients ≥45.
  - Patients <45 with persistent (>3/12) consecutive symptoms and/or risk factors for endometrial Ca.
- Urgent colposcopy clinic referral
  - IMB in history of LLETZ or high grade CIN/CGIN (borderline or mild abnormality).

Irregular bleeding

- Idiopathic.
- Fibroids.
- Polyps.
- Hyperplasia.
- Malignancy.
- Clotting disorders.

Investigations

- Height, weight, BMI.
- BP.
- Abdo for masses.
- Bimanual if confident. If not confident, USS.
- Check status of cervical cytology status.
- Young women = FBC.
- Truely irregular bleeding = FSH and LH during period. Good idea if due to PCOS or ovarian failure.
- TFT.
- Think STI.
- Day 21 progesterone.

to determine if anovulation

- Progesterone at mid luteal phase.
- Luteal phase is always fixed at 14/7.
- So mid luteal phase 7/7 before the next period is due.
- Obviously with irregular periods may have to do a few to guess the right day.

Puberty / Reproductive age

Young women with no risk factors don't need to be examined.

Puberty

- First few cyles are related to anovulation.
- If you do not ovulate you do not get progesterone.
- So you get unopposed oestrogen.
- So the endometrium builds up and up.
- Then it starts shedding.
- 6-8/52 without periods, then spotting and slow bleeding, and keeps cycling.
- Can go on for 2-4 yrs.

- Do not do USS !
  - Structural lesions are very rare in adolescents.
  - If you really think it's needed then refer to gynae instead.

- Norethisterone for 10 days.
- Hopefully this will put them into a cycle.
- If not, then can repeat the cycle for 3/12.

Copied from Dr Latte lecture on troublesome bleeding
So ? how fits in here.
??? If high dose COC 50mcg can close epiphyseal plates early, so use 20mcg versions which are safe.
- Or just use a POP.???

Reproductive age

- Pregnancy
  - Irregular periods common due to retained products of conception e.g. after pregnancy or miscarriage.
  - Up to 6/52 after.
  - Breast feeding produces prolactin which inhibits FSH from the pitiatary, so no follicle will be produced and so no periods, but depends on frequency, timing duration of breast feeding.
- Stress
  - Stress is common cause.
  - Usually heavy and prolonged.
    - The mechanism for stress affecting the menstrual cycle seems to be that high levels of glucocorticoids released in response to prolonged stress, predominantly cortisol in humans, impact all levels of the female reproductive system. The most significant effect seems to be that it suppresses GnRH release and thus LH release, suppressing ovulation and therefore the second half of the menstrual cycle. It is likely to also, therefore, be an effect on progestogen and oestrogen balance which will, in turn, cause a variety of symptoms.
- Weight
  - Getting BMI >20 will in 90% cause a return of the period.
- PCO
  - 23% of all women will have polycystic ovaries.
  - Minor subfertility
- PCOS
  - Very irregular periods.
  - USS and pituitary hormones.
- Infection
  - Chlamydia. Not usually other infections.
  - PID which is chronic causes heavy prolonged periods rather than irregular.
- Fibroids
  - Fibroids in wall or outside will cause heavy but not irregular periods.
  - Fibroids inside can cause irregular bleeding.
- Polyps
  - Polyps on cervix PCB or irregular bleeding.
- Endometriosis
  - Endometriosis does not cuase irregular periods, usually heavy.
- Contraception
  - Pill can cause breakthrough bleeding.
  - Most commonly because too low dose of pill.
  - Increase the dose.
  - Mirena will cause irregular bleeding.

Perimenopause

- Menopause can cause lighter and bigger gaps inbetween e.g. up to 3/12.
- Or can cause amenorrhoea for 6/52 and then start heavy bleeding.
- Treatment is the same as pubertal = norethisterone.

Menorrhagia

- Dysfunctional uterine bleeding.
- Fibroids.
- Uterine polyp.
- Cervical pathology.
- Adenomyosis.
- Endometriosis.
- Endometrial hyperplasia.
- Endometrial cancer.
- Coagulopathy.

- Less than 50% of women have an identifiable pathology.
- Even if pathology is identified It may not be the cause of the menorrhagia.

Investigations

- Abdo examination.
- Speculum.
- Bimanual.
  - Cervix.
  - Size, mobility, tenderness of uterus.
- Triple swabs.
- FBC.
- TFT. only if
  - They have other signs of thyroid disorder, because is not a cause of menorrhagia.
- Coagulation screen. only if
  - Heavy bleeding since menarche.
  - Heavy blood loss after operation/childbirth/operations.
  - FHx of coagulation disorder.
- USS. only needed if any of following
  - Palpable uterus abdominally i.e. > 12/40.
  - Uterus fixed (suggesting adhesions).
  - Significant uterus tenderness.
  - Pelvic mass.
  - Medical treatment failed.

do not test

- FSH & LH.
  - As per Dr Sarah Gray, this is a useless test if you are having periods.

Management

- Mirena
  - Progestogen prevents endometrial build up.
  - ↓ bleeding by 71-96%.
  - Can take 6/12 to be effective.
  - Can cause irregular bleeding.
  - Can use if no pathology, or fibroids < 3cm which are not distorting the uterine cavity, or adenomyosis.
    - Works for 5 yrs.
- Tranexamic acid
  - 1g QDS from first day of period for 4/7 MAX.
  - It is safe in <12y. If <50kg 500mg TDS. If >50kg can give adult dose.
  - Competitive inhibitor of plasminogen activator, hence, stops fibrin breaking down. Helps bleeding from open blood vessels e.g. leg blown off on in war and arterioles in myometrium rather than shedding of the endometrium.
  - ↓ bleeding by 34-59%.
  - Will not help dysmenorrhoea (painful periods).
  - Will not regulate cycle.
  - Can be used indefinately if effective.
  - If fails after 3/12 stop.
  - not suitable if
    - Medications that affect clotting.
      - Theoretical risk of thrombosis.
      - No evidence of coagulation within healthy vessels.
      - Hence, if no other major thrombotic risk factors, then yes it can be used with COC.
      - Remember could use COC back to back.
    - Hx VTE.
    - Severe renal impairment.
    - Hx sezuires.
    - Fibrinolytic disorder after DIC.
- NSAIDS
  - Prostaglandin synthesis inhibitors.
  - Class effect, so can use any NSAID.
  - ↓ bleeding by 16-49%.
  - Helps with dysmenorrhoea.
  - Can be used with tranexamic acid.
- COC
  - Do not use patch as not as good control as tablet.
  - Helps regulate cycle.
  - Helps with dysmenorrhoea.
  - Helps with breast pain.
    - Qlaira (estradiol 1-3mg and dienogest).
    - Dienogest is very marked stablising effect on the endometrium, hence, reduces bleeding.
    - ↓ bleeding by 80%.
    - In 20% stops bleeding altogether.
    - 5 different coloured tablets with different strengths through the cycle.
    - Designed to provide best bleeding control.
    - 26 active tablets. 2 placebo tablets.
    - Same efficacy for contraception as other COC.
      - Zoley (estradiol and nomegesterol).
      - Good evidence that ↓ bleeding.
      - 24 active pills. 4 placebo pills.
        - If you use other more common COC then give for 9/52 then 4/7 break as this has best evidence to ↓ bleeding.
- POP
  - Lot's of different medications and dosages suggested by specialists.
  - Desogesterol 75mcg, use double dose for 2-3/12 then normal dose.
  - Medroxyprogesterone is much safer in terms of VTE risk compared to norethisterone (which converts to oestrogen hence, the VTE risk with northisterone). Although Norethisterone is actually better at controlling the bleeding.
  - Can be used on intermittent basis as well.
  - Days 17-25, 10mg TDS.
  - Days 5-25, 10mg BD or TDS.
  - Days 5-26, 20-30mg OD, then stop for 7/7.
- DEPO
  - Can be used every 12 weeks as per expert advice.
  - Be aware osteopenia risk.

1 dysmenorrhoea

Symptoms

- Usually 1/7 before menstruation.
- Settles after 3/7.
- Nausea.
- Vomiting.
- Pain in other area.

2 dysmenorrhoea

- Endometriosis.
- Adenomyosis.
- PID.
- IUS/IUD fitted within 6/12.

- Usually 1/7 before menstruation.
- Lasts throughout menstruation.
- GI symtpoms.
- Pain and bleedign on defacation.

Investigations

- Swabs.

Management

- Referr to gynacologicy if :
- Severe.pain.
- Trying to conceive.

Amenorrhoea

13-14y and no 2o sexual characteristics
OR
15-16y but normal 2o sexual characteristics

3-6/12 if previously normal periods
OR
6-12/12 if previously oligomenorrhea
OR
amenorrhoeic 6/12 after stopping COC
OR
amenorrhoeic 9/12 after last DEPOT

- Menses occurring less frequently than every 35/7.

1o amenorrhoea

- Rare 0.3%.

Normal secondary sexual characteristics (such as breast development)

- Physiological:
- Constitutional delay i.e. no anatomical abnormality, and maturation usually occurs spontaneously by 18y. 2o sexual characteristics are also likely to be delayed. Often familial.
- Pregnancy.

- Genito-urinary malformations:
- Imperforate hymen.
- Transverse septum.
- Absent vagina or uterus.

- Endocrine disorders:
- Hypothyroidism.
- Hyperthyroidism.
- Hyperprolactinaemia (e.g. prolactinoma or medications).
- Cushing's syndrome.
- PCOS (rare).

- Androgen insensitivity syndrome.

No secondary sexual characteristics (such as breast development)

- Primary ovarian insufficiency (POI):
- Chromosomal irregularities (Turner's syndrome [46XO] and gonadal agenesis [46XX or 46XY]).
- Chemotherapy, pelvic radiation and autoimmune disease.

- Hypothalamic dysfunction:
- Stress, excessive exercise, wt loss (functional hypothalamic amenorrhea).
- Chronic systemic illness e.g. uncontrolled diabetes, coeliac disease, severe renal and cardiac disorders and cancer.
- Hypothalamic or pituitary tumours, cranial irradiation, infection or head injury, Kallman's syndrome (congenital gonadotrophin deficiency characterized by anosmia and other cranial anomalies), empty sella syndrome.

- Causes of ambiguous genitalia:
- 5-alpha-reductase deficiency.
- Androgen-secreting tumours.
- Congenital adrenal hyperplasia.

Investigations

- Hx
  - Cyclical lower abdo pain.
    - Haematocolpos.
  - Stress, depression.
  - Weight loss, excessive exercise.
  - Chronic systemic illness.
  - Pituitary adenoma.
    - Headache, visual symptoms and galactorrhoea.
  - Mom and sister age of menarche.
    - Late menarche suggests constitutional delay.
  - FHx genetic conditions.
  - Drugs.
- Examination
  - BMI.
  - Turner's syndrome.
  - Cushing's syndrome.
  - Clitoromegaly if hirsutism.
  - Galactorrhoea.
    - If did breast examination, delay for 48 hours.
  - Haematocolpos.
    - If Hx cyclical lower abdominal pain.
  - Prolactin.
  - TSH.
  - FSH, LH.
  - Total testosterone.
    - If symptoms of androgen excess.
      - Result 2-5 =
      - PCOS
      - Result ≥ 5 =
      - Androgen insensitivity
      - Androgen secreting tumour
      - Congenital adrenal hyperplasia
      - Cushings syndrome
  - Pelvic USS.
    - Pelvic examination inappropriate in young girls who are not sexually active.
    - Pelvic USS can assess pelvic anatomy.

Management

- How to interpret results?
- Please see CKS.

- Refer to gynaecologist.
  - if suspect
  - Anything else apart from...
- Refer to endocrinologist.
  - if suspect
  - Hyperprolactinaemia
  - Thyroid disease
  - Androgen excess

2o amenorrhoea

- 3 4% in women of reproductive age.
- 5-60% in competitive endurance athletes

No features of androgen excess e.g. hirsutism, acne and virilization

- Physiological:
- Pregnancy.
- Lactation.
- Menopause.

- Premature ovarian insufficiency:
- Chemotherapy.
- Radiotherapy.
- Autoimmune disease.

- Hypothalamic dysfunction due to stress, ↑ exercise, wt loss.

- Other hypothalamic causes, including:
- Chronic systemic illness e.g. severe cardiac, renal, or liver disease, IBD, coeliac disease, AIDS or cancer.
- Cranial irradiation, infection or head injury.
- Central nervous system tumours (e.g.craniopharyngiomas or metastases).

- Pituitary:
- Prolactinoma.
- Head injury and cranial irradiation.
- Hypopituitarism (e.g. traumatic brain injury).
- Sheehan's syndrome (pituitary infarction after major obstetric haemorrhage).
- Sarcoidosis.
- TB.

- Uterine:
- Cervical stenosis.
- Asherman's syndrome (intrauterine adhesions).

- Thyroid disease (hypo/hyperthyroidism).

- Iatrogenic:
- Contraception.
- Medications e.g. antipsychotics (↑ prolactin), and illicit drugs e.g. cocaine and opiates (cause hypogonadism).
- Surgery (e.g. ovarian surgery).

Features of androgen excess e.g. hirsutism, acne and virilization

Polycystic ovary syndrome.
Cushing's syndrome.
Late-onset congenital adrenal hyperplasia.
Androgen-secreting tumours of the ovary or adrenal gland (rare).

Investigations

- Hx
  - Recent contraception.
  - Menopause symptoms.
  - FHx cessation of menses <40y.
    - Premature ovarian failure.
  - Mom and sister age of menarche.
  - FHx geneteic conditions.
  - PCOS symptoms.
  - Stress, depression.
  - Excessive exercise and wt loss.
  - Pituitary adenoma.
    - Headache, visual symptoms and galactorrhoea.
  - Thyroid symptoms
  - Surgery causing intrauterine adhesions.
  - Illicit drugs.
  - Cyclical lower abdo pain.
- Examination
  - BMI.
  - Cushing's syndrome.
    - Striae, buffalo hump, significant central obesity, easy bruising, HTN, and proximal muscle weakness.
  - Virilization.
    - Deep voice, temporal balding, ↑ muscle bulk, breast atrophy and clitoromegaly.
  - Galactorrhoea.
  - Visual fields.
  - Prolactin.
    - If did breast examination, delay for 48 hours.
  - TSH.
  - FSH, LH.
  - Total testosterone.
  - Pelvic USS.

Management

- How to interpret results?
- Please see CKS.