CASE 6

Short case number: 3_4_6
Category: Endocrine & Reproductive Systems
Discipline: O&G
Setting: General Practice
Topic: Adolescence – dysmenorrhoea – menorrhagia

Case

Min Li aged 16 years presents with her mother complaining of painful periods. Her mother is concerned because Min is missing school for two to three days every time she has a period and she is worried because Min's school grades have dropped from excellent to above average. She has given Min Panadeine but it doesn't help.

Questions

1. Summarise the pathophysiology of dysmenorrhea.
2. List the key element of history, examination, investigations and management in this case.
3. If during the history Min tells you she bleeds for 10 days and it is heavy with clots and flooding for the first three days, what further history and examination and investigations would then be warranted.
4. What management would you instigate if her HB was 8.9g/dl.
5. Describe the additional management options for dysmenorrhea if this patient is 46yo.

Suggested reading:

- Abbott, J., Bowyer, L., & Finn, M. (2014). *Obstetrics and Gynaecology: an evidence-based guide (2nd ed).* Australia, Elsevier. Chapter 8

ANSWERS

1. Dysmenorrhoea – pathophysiology

Dysmenorrhea is caused by vasoactive eicosanoids producing abnormal uterine contractions and decreasing uterine blood flow, with subsequent ischemia similar to angina.

Sometimes helpful to classify into primary and secondary dysmenorrhoea .Primary:.lasting 1-2 days of menstrual blood flow; secondary: lasting almost throughout flow. Primary mainly due to prostaglandin "excess"/"sensitivity" (can also cause nausea, diarrhoea, mild pyrexia) and consequent intense uterine cramping; secondary mainly due to pelvic pathology e.g. PID and endometriosis. Endometriosis can present in adolescent years. New Zealand has developed a web page specific for endometriosis in adolescence to increase awareness https://nzendo.org.nz/managing-endo/

Lifestyle factors that can aggravate dysmenorrhoea – weight > 90%tile/ alcohol/ smoking/ early age of menarche/ lack of exercise, caffeine containing drinks/lack of sleep and constipation

2. History/Examination/Investigations/Management

History – always include age of menarche/ normal development/ flow of menses/ patients expectations. Need family history (mother in particular) risk taking history (drugs, smoking, alcohol, eating habits), obstetric, gynae and surgical history. Specifically ask if sexually active, what contraceptive methods used if any pain with intercourse. Look at timings of pain, relieving factors, site of pain etc. QOL /affects ADLs

Always talk to the adolescent and don't treat the mother as the patient – may need to take history of sensitive issues independent of mother.

Examination –**Consider pelvic examination if sexually active for STI screening.** General examination is warranted (normal development, hair, breasts, thyroid) but again there is no imperative if the patient feels uncomfortable with anything other than a cursory examination.

Investigations – Guided by history but usually limited to FBC (may have dietary issues causing anaemia). Possible pelvis/abdominal U/S.
Mother and patient often convinced an abnormality exists owing to severity of pain and days required off school and an ultrasound will persuade them that you have taken them seriously. Just being told "it is physiological" without having some form of imaging may be perceived as inadequate care.
If dysmenorrhoea mainly secondary (particularly if associated with other symptoms suggestive of endometriosis: heavy periods, premenstrual brown staining, dyspareunia and dyschesia) then a diagnostic laparoscopy is appropriate. If this is a first hospital admission adolescents can find this quite traumatic requiring considerable post op pain relief and reassurance.

Management – lifestyle – increasing exercise. Being proactive with analgesia. Being "believed" and being told the pain does not mean there is "something terribly wrong" is helpful in lessening the impact of pain.
PG synthetase inhibitors – Mefenamic acid/ NSAID taken regularly at the first sign of discomfort
OCP – first line if contraception required, also used if minimal response to NSAID. When exact day of period anticipated with OCP can commence the NSAID 24-48 hours before for improved therapeutic response.
Consider progesterone tablets, depoprovera or mirena iucd
If these measures are not effective laparoscopy+ plus surgical treatment if endometriosis is present

3. Combined with Menorrhagia

History – timings and flow quantities (pad numbers, size etc.), expectations of what is normal is vital as is the pain history – if the mother and daughter have expectations of virtually no vaginal loss then this will necessitate a different strategy. QOL /affects ADLs.

Examination –Pelvic examination only if sexually active.

Investigations – FBC (quantifies loss), ferritin, serum Fe, TSH (hypothyroidism causes menorrhagia), coagulation screen, Abdominal U/S (not transvaginal unless sexually active)

Management - treat anaemia if present and the need for contraception.
Tranexamic acid (antifibrinolytic) 1G 6/24 reduces flow by 50%.
Mefenamic acid – reduces flow by 25%
OCP – decrease flow by 50% (and pain), regulates cycle and can reduce absolute number of cycles (skip periods), contraceptive
Cyclical luteal phase progestogens from day 12 -26 (2 weeks) of each cycle (Day one =first day of bleeding) e.g. medroxyprogesterone acetate 10mg tds. Maybe difficult for an adolescent to remember this-may need mother's help.

4. Management if Hb low

a. Diet – teenagers have poor diets – 50% of teenagers will be anaemic (Hb<11.5) – Fe deficiency, folate deficiency and B12.
b. Identify causes – in this case menorrhagia and treat as above
c. Replace Fe – usually give Fe and folate combined as in pregnancy because of dietary issues or consider iron infusion
d. If not improving – look at compliance and for other pathology

5. Management options for dysmenorrhea

Hysterectomy +/- bilateral salpingo-oophorectomy