GP Handbook v8.2

Obstetrics & Gynaecology

ABNORMAL VAGINAL BLEEDING

Menorrhagia

Loss of more than 80ml of blood per cycle in a patient who has regular cycles.

Underlying conditions to look for:

- Uterine fibroid
- Adenomyosis/endometriosis
- Presence of an IUCD
- Pelvic inflammatory disease (PID)

Points to note during consultation:

- History of IUCD placement
- Risk factors for the development of PID
- Associated symptoms e.g. dysmenorrhoea, dyspareunia, vaginal discharge.
- Symptoms of anaemia.

Signs to observe at speculum examination:

- Size, shape and mobility of uterus
- Evidence of pelvic infection (microbiological studies may be indicated).

Heavy bleeding

Norethisterone 5mg (Norcolut) 15mg bd for 2 days, then
10mg bd for 2 days then
15mg qd for 2 days then
10mg qd for 2 days.

Withdrawal bleeding may occur afterwards.

Moderate bleeding

Tranexamic Acid (Transamin) 500 qid and/or
Mefenamic Acid (Napan) 500mg tds from day 1 until the bleeding stops (2-4 days)

Consider starting the patient on the combined oral contraceptive pills (COC).

Anaemic patients may need iron supplement. If indicated, give Ferrous Gluconate 300mg (tab 1) bd-tds for at least a few months. The aim is to raise the haemoglobin at a rate of 1 g/dl each month until the normal haemoglobin level is reached. Then continue the replacement for another 3 months to replenish the iron store in liver.

Refer any patient who is not responding to the above treatment.

Inter-Menstrual Bleeding

All cases are considered abnormal, except

- mid-cycle spotting (caused by a slight decrease in oestrogen level during ovulation)
- premenstrual spotting (not more than 3-4 days prior to day 1)
- breakthrough bleeding in patients who are on COC pills; consider changing to a COC with a higher dose of progestogen, eg Norgestrel + Ethinylestradiol (Eugynon)

Underlying conditions not to be missed:

- Cervical cancer, polyp, and erosion.
- Carcinoma of uterus.
- Endometrial polyp.
- Pelvic inflammatory disease (acute/chronic/acute-on-chronic).
- Urethral carbuncle.

Points to note during consultation:

- Features of pelvic inflammatory disease.
- Duration and time of bleeding.
- Compliance of COC pills (if taking).
- Symptoms and signs of gynaecological cancers.

A speculum examination is usually required.

- Inspect the introitus for any lesion that may contribute to the bleeding.
- Look for evidence of pelvic pathology; take swabs if indicated.
- Inspect the cervix carefully.
- Perform a cervical smear.

Post-Menopausal Bleeding

All cases of vaginal bleeding after menopause are considered abnormal and require urgent specialist attention to exclude such conditions as endometrial and cervical carcinoma.

AMENORRHOEA/OLIGOMENORRHOEA

Primary Amenorrhoea

If menarche has not occurred by 15 years of age, check:

- Stature and body form (anorexia, Turner's Syndrome).
- Breasts and other secondary sexual characteristics (menarche usually occurs within 2 years of breast development).
- External genitalia.

If the above are normal, further investigations are not essential before 17 years of age. If you decide to investigate, or if menarche has not occurred after 17 years of age, consider the following tests before referral:

- Blood for FSH, LH, prolactin, oestrogens
- Ultrasonography of pelvis

Refer any girl older than 14 years who has no breast development or whose menarche has not commenced 2 years after breast development.

Secondary Amenorrhoea

Absence of menstruation for 6 consecutive months in a female who has previously established a cycle.

Any normal female in reproductive age presented with a missed period is pregnant until proven otherwise. **DO A PREGNANCY TEST !**

If patient has irregular cycles all along and the pregnancy test is negative, there is little point in investigating further if fertility is not a concern.

Ask about recent stress and lifestyle changes.

Drug history: hormonal contraception (post-pill amenorrhoea may last up to 6 months; same or even longer for depo-Provera), steroids…etc.

Obstetric history: amenorrhoea lasts for up to 12 weeks after delivery, longer if the lady breast feeds.

Look for evidence of

- Polycystic ovary syndrome: obesity, hirsutism and infertility
- Anorexia nervosa
- Thyroid dysfunction (especially hyperthyroidism)
- Prolactinoma (visual field defects, galactorrhoea)
- Climacteric symptoms: vasomotor instability, mood changes...etc

Investigations

- Blood for TFT (TSH, Free T3, Free T4)
- Prolactin
- FSH and LH
- Oestrogens
- Ultrasonography of pelvis

Management

- Nothing can replace thorough explanation and proper reassurance. Anxiety may aggravate the condition.
- There is no place for the so-called "menstruation relief injection", as this does nothing but mask the symptom, and would probably disrupt the hormonal cycles further.
- Consider using COC pills for cycle control/contraception if there are no abnormalities found.
- Fertility may not be impaired in these patients; advise on proper contraception if pregnancy is not desired and refer if fertility is a concern for the patient.

Refer to a gynaecologist if

- FSH is high and the patient is under the age of 45. This indicates premature ovarian failure;
- LH /FSH ratio is more than 3:1. This suggests polycystic ovary syndrome; or
- Prolactin is over 800 miu/l. This suggests a pituitary adenoma. Repeat the test if the level is between 400 and 800.

If the above are normal, perform a progesterone challenge (see below).

Progesterone Challenge

Give medroxyprogesterone (Provera) 5mg daily for 5 days.

If a withdrawal bleed follows, oestrogen levels are satisfactory. The problem is merely a lack of cyclicity. If the patient wishes to become pregnant she can be given clomiphene. If she does not wish to become pregnant she must use contraception.
If no withdrawal bleed occurs, refer. This indicates that oestrogen levels are low, due either to pituitary or ovarian failure and the patient should be referred.

CONTRACEPTION

	Contraception	Failure rates (number of unwanted pregnancies per 100 woman year)
Hormonal	Combined pills (COC)	0.1-1.5
	Progestogen-only pills (POP)	1.5-3.0
	Postcoital contraception	1-2
	Depo-Provera Nonesterol	0.5-1.5 N/A
Non-hormonal	Condoms	4-10
	IUCD	<3
	Safety period	20-30
	Coitus interruptus	20-30
	Spermicides	N/A

Combined Oral Contraceptive Pills (COC)

EXCLUDE PREGNANCY before starting any patient on COC.

Absolute contraindications:

- Cardiovascular (coronary heart disease, diabetic vasculopathy, thromboembolism, valvular lesions)
- Hepatic (acute/chronic liver disease, dyslipidaemia, history of cholestasis of pregnancy)
- Neurovascular (history of TIA)
- Gynaecological (pelvic pathology)

Relative contraindications:

- Family history of vascular disease
- Smokers aged 35 and over
- Diabetes

Before prescribing,

- record weight and blood pressure
- perform a thorough gynaecological examination (including breast examination, vaginal examination, a cervical smear and USG pelvis)
- explain on the use and side effects of the COC

Prescribing

- First time users: Start with a low-dose preparation, eg Mercilon or Harmonet.
- Maintain the patient on the pill with the lowest dose of progestogen without causing breakthrough bleeding.
- Diane-35 can be used in patients who want to control acne.
- Triphasic COCs (eg Trinordiol) contain lower total levels of hormones per cycle and mimic the natural hormonal cycle, but as they require more detailed instructions, they

are mostly offered to the more intelligent / educated women only.

After prescribing, follow up the patient:

- bimonthly for the initial half year
- then half-yearly for one year
- then yearly

Nuts and bolts of COCs

- Take pills daily at around the same time of the day. Start on day 1 of menses.
- The most dangerous time for pills to be forgotten is on either side of the pill-free week. Forgetting in the middle of a packet is less likely to give rise to breakthrough ovulation or pregnancy.
- If less than 12 hours late, the woman should take the missed pill, take the next one on time, and assume no loss in contraception.
- If more than 12 hours late, she should take the missed pill, take the next pill at the normal time, and take extra precautions for 7 days.
- If more than 12 hours late and the 7 days of precautions run into the pill-free week, she should, in addition, omit the pill-free week and start a new pack immediately, disregard any bleeding, and report if the next withdrawal bleed fails to occur.
- If more than one pill is missed, consider emergency contraception if 5 or more pills are missed mid-pack; or 2 or more pills are missed at the start or end of a pack.
- Start the next pack after 7 days of finishing the old one, no matter if the bleeding has stopped or not.
- If breakthrough bleeding occurs, continue the pill; if this recurs for more than 2-3 cycles, a COC with a higher progestogen content may be needed.
- COC does not affect subsequent fertility which usually returns upon stopping the pill.
- There is a possibility of post-pill amenorrhoea, which may last up to 6 months.
- Side effects: headache, nausea, oedema, breakthrough bleeding, weight gain, breast tenderness, mood changes.

Progestogen-Only Pills (POP)

- A full gynaecological examination is required before starting POP (eg Mincronor, Microval).
- POP can be used in a patient whose use of COC is contraindicated.
- POP does not cause thromboembolic complications, and does not affect milk production (therefore can be used during lactation).
- POP needs to be taken regularly at the same time of the day (more stringent time control is needed) for the desired contraceptive effect. A postponement of as little as 3 hours can affect its effectiveness.
- Irregular bleeding is one of the main side effects of POP.

Injectable Steroids

Depo-Provera (medroxyprogesterone acetate 150mg)

- Dosage: 150mg im every 3 months
- Does not cause thromboembolic complications
- Irregular bleeding / amenorrhoea may occur (Provided that the patient receives injections regularly, protection against pregnancy is still good).

Nonesterol (dihdroxyprogesterone acetophenide 150mg + oestradiol-17-enanthate 10mg)

- Causes regular bleeding
- Monthly injections between day 7-10 of menses

Post-Coital Contraception

Management of unprotected sex

- Confirm with the patient whether she is worried about unwanted pregnancy
- Assess the possibility of STDs
- Suggest post-coital contraception
- Advise about contraception in general
- Give education on safe sex

The levonorgestrel regimen

This can be considered if a woman presents within 72 hours of unprotected intercourse:

- Postinor-2, tab 1 stat, another tab 12-hour afterwards
- Maxolon tab 1 tds prn

The patient might have a light vaginal bleeding several days after taking the last dose. There is a failure rate of 1%. The patient should return if her next period does not arrive on schedule. Contraindications include pregnancy, past history of ectopic pregnancy, vaginal bleeding of unknown origin, hepatic & biliary diseases, history of gestational jaundice, malignant breast, ovarian or uterine tumour, and breast-feeding.

IUCD insertion can be used if:

- the patient presents within 5 days of unprotected intercourse; or
- within 5 days of the calculated time of ovulation if intercourse took place more than 5 days before presentation, whether or not further intercourse has taken place in the last 5 days.

Intra-Uterine Contraceptive Device (IUCD)

- Low failure rate. (<3/100WY)
- Does not increase the risk of ectopic pregnancy
- Before advising the patient on the use of an IUCD, exclude ongoing pelvic infection.
- For insertion, refer to our gynaecologist (It is easier to insert the device during/just after a period).
- Can be used as a form of post-coital contraception (see above)

Potential side-effects:

- Increased risk of pelvic infection
- Expulsion (patient may be unaware of this)
- Perforation of the uterus (1/1000 first fittings)

Condoms

- Effective in both preventing pregnancy and STDs when used correctly
- A surprising number of patients do not know how to use condoms correctly - it needs to be worn as soon as the penis is erected, and to be removed from the penis right after ejaculation.

Safety Period

- This is very unreliable, but if the patient insists on using this method (eg for religious reason - this is one of the few ways of contraception approved by the Roman Catholic Church) then you may give her the following information.
- To prevent conception, she should avoid intercourse from 3 days before to 1 day after her ovulation. (Sperms only live for 72 hours in the vagina, and an ovum dies after 24 hours of being released if not being fertilised.)
- Since very few women are completely regular, the fertile period is roughly calculated by deducting 18 days from her shortest menstrual cycle, and 11 days from her longest within a six month's period.
- Ask her to note her cycle lengths for 4-6 months. If, her range of cycle lengths were from, say, 28 to 35 days, the possible fertile period would extend from day 10 to day 24, and between these days intercourse should be avoided.
- This method is not suitable for those with very irregular menses.

Spermicides

- In the form of sponge, pessaries, creams, aerosols, films, or foaming tablets
- To be inserted into the vagina before intercourse
- They are designed for use with a condom.

Sterilization

- Irreversible
- Can be performed on the male / female
- These patients should be referred for counselling

DYSMENORRHOEA

- Watch out for underlying pelvic pathologies. (most commonly endometriosis, pelvic inflammatory disease - chronic / acute / acute-on-chronic).
- Younger patients usually point towards primary dysmenorrhoea (but there are exceptions).
- History: change from painless periods to painful periods; unprotected intercourse; multiple sexual partners; IUCD insertion
- Associated symptoms: dyspareunia; abnormal vaginal discharge / bleeding; infertility; menorrhagia
- Speculum examination is required if there is any suspected pelvic pathology. Perform swabs if indicated.

Management

- Treat the cause!
- If no cause is found, give analgesics and antispasmodics.
- COCs are effective in controlling the rhythm, the pain and the flow amount.
- Consider removing the IUCD if present - symptoms may improve. Do not forget to suggest suitable alternative contraception if pregnancy is not desired.

Refer when

- chronic pelvic infection or endometriosis is suspected
- a pelvic mass is present
- infertility is a concern
- symptoms are not responding to the above treatment

HORMONAL REPLACEMENT THERAPY

Women's Health Initiative (WHI) Study

It is a randomized controlled primary prevention trial (planned duration 8.5 years) of assessing the major health benefits and risks of the most commonly used combined hormone. In this study, 16,608 postmenopausal women aged 50-79 years with an intact uterus at baseline were recruited by 40 US clinical centers in 1993-1998.

The main result of WHI can be understood as follows: If we consider 10,00 women taking either placebo or oral oestrogen plus progestogen treatment for one year, the number of health events occurring in these 2 groups of women would be:

Health Event	**Placebo**	**Oestrogen + Progestogen**
Invasive breast cancer	30	38
Heart attack or coronary events	30	37
Stroke	21	29
Blood clots in the lungs	16	34
Colorectal cancers	16	10
Hip fractures	15	10

Local Recommendations

From The Hong Kong College of Obstetricians & Gynaecologists and The Obstetrical & Gynaecological Society of Hong Kong

Appraisal of the statistics

- The above figures apply to women with an average age of 63 who have taken this particular combination of hormones for an average around 5 years.
- The data do not necessarily apply to younger women or those who are taking either lower doses of both hormones or on oestrogen alone or a different combination or formulation of oestrogen and progestogen.
- These figures are not relevant to women taking hormones for a relatively short period of time to control menopausal symptoms.
- For some women, particularly those with known osteoporosis, the overall benefits may still outweigh the risks.
- The increased risk of breast cancer in the treatment group was 8 per 10,000 woman-years, which is in line with or even lower than the previous reported incidence of breast cancer after hormone replacement therapy.
- It is also important to note that in the WHI trial, women in the oestrogen alone study group have not shown an increased risk of breast cancer as compared to placebo up to 5.2 years of treatment.

Suggestions to postmenopausal women

- Women who have been using oral oestrogen plus progestogen for less than 5 years should not be unduly concerned by these findings but should have annual review of their therapy with their doctors.
- Women who have had a hysterectomy and are taking oestrogen only preparations

should not be concerned as these findings do not pertain to them, and if anything, should feel reassured as the oestrogen only part of the study has not shown increased risk of breast cancer.

- Women who have been using oral oestrogen plus progestogen for 5 years or more should discuss their personal benefit and risk profile with their doctors at their next review appointments, and decide whether or not their treatment should be modified.
- Women who have been using non-oral oestrogen plus progestogen for 5 or more years should be aware that the results of the WHI study may not apply to them. Whether or not non-oral therapy carries the same risks or benefits as oral HRT awaits further investigation.
- The safety of even short-term use of HRT has raised concerns because there is no proven absolute "safe period".

HYPERTENSION IN PREGNANCY

Hypertensive disorder in pregnancy is a major health problem. It also represents an important cause of maternal mortality. The term "hypertension in pregnancy", nevertheless, refers to a myriad of conditions in which management strategies differ. For example, white-coat hypertension is not uncommon in pregnancy. The doctrine of treating hypertension in pregnancy dictates that we are taking care of two subjects - the mother and the foetus. Antihypertensive treatment for mild chronic hypertension benefits the mother, but its impact on perinatal outcomes is less clear.

Few controlled studies are currently available to support the treatment guidelines for these conditions although hypertensive disorders are thought to be the most common medical conditions of pregnancy.

Pharmacological Treatment

All classes of antihypertensive drugs have either been shown, or are assumed, to cross the placenta and reach the foetal circulation. Their potential adverse effects are poorly established and quantified. Decisions regarding which drugs to use are largely driven by balancing the unknown risks against the unknown benefits of blood pressure control.

Pre-pregnancy counselling should theoretically be offered to all women who are on antihypertensive medication. At the first prenatal visit during early pregnancy, it is not unreasonable to discontinue antihypertensive drugs in women with uncomplicated mild chronic hypertension as long as close monitoring is possible. Drug therapy can be reinstituted when blood pressure rises to a concern level (eg 150-160/100-110 mmHg).

The drug of choice include methyldopa, labetalol, hydralazine and long-acting calcium channel blockers (nifedipine sustained release tablets, but not nifedipine capsules). Among them, methyldopa probably has the longest track record of safety even though available data are inadequate to provide head-to-head comparison. Thus far, no direct adverse effect of this drug on the foetus (by lowering uteroplacental blood flow or influence on the umbilical circulation) has been demonstrated. Previously, short-term treatment with methyldopa during the third trimester has been shown to have no adverse effects on uteroplacental and foetal haemodynamics. In a recent experiment measuring in vitro drug effect on human umbilical artery resistance, it has been shown that most drugs, except methyldopa, have significant direct effects on the feto-placental circulation. Most important of all, methyldopa remains the only antihypertensive drug with a 7.5-year follow-up evaluation of children born to treated mothers. Methyldopa should be avoided in women with a prior history of depression owing to the increased risk of postnatal depression.

Women of childbearing age treated with angiotensin-converting-enzyme (ACE) inhibitors and angiotensin receptor blockers (ARB) should be informed of the need for drug discontinuation within the first trimester should they become pregnant. Although there are no data to suggest teratogenicity of these drugs, adverse foetal (developmental) effects are noted due to their action on the foetal renin-angiotensin system (during the second and third trimesters), and ischaemia from maternal hypotension and compromised foetal-placental blood flow. Blockade of the conversion of angiotensin I to angiotensin II is supposed to have adverse effects on the developing foetal kidneys. Reported foetotoxicity of ACE inhibitors and ARB include oligohydramnios or foetal anuria, intrauterine growth retardation, pulmonary hypoplasia, renal tubular dysplasia, hypocalvaria or incomplete ossification of foetal cranium. This has led to the general guidelines to avoid ACE inhibitors and ARB during the second and third trimester of pregnancy, and that women who become pregnant whilst taking these drugs change to another antihypertensive drug of different class as soon as the pregnancy is recognized. Whilst the greatest risk to the foetus appears to be associated with drug exposure in the third trimester, proper patient education is warranted to ensure timely

discontinuation. As indications for ACE inhibitors have expanded, their use among women of reproductive age (and hence first-trimester foetal exposure) has increased.

The safety of beta blockers (particularly atenolol) and thiazide diuretics still remains unresolved if used during pregnancy. Despite the lack of evidence for any substantial teratogenic risk, these drugs still causes concern of a different nature. It is our preference not to use thiazide diuretics which might lead to hyperuricaemia, as this would invalidate serum uric acid as a laboratory marker in the diagnosis of superimposed pre-eclampsia.

Watch out for

- Pelvic infection
- Polycystic ovarian syndrome
- Climacteric symptoms
- Anorexia.
- Pregnancy (threatened abortion)
- Thyroid dysfunction (either hyper- or hypo-)
- Prolactinoma

Investigations

- Thyroid function
- Prolactin
- LH/FSH
- Oestrogens
- Ultrasonogrphy of pelvis

If all of the above are normal then reassure the patient, or try the COC pills if contraception is desired.

Refer when fertility is a problem.

IRREGULAR MENSTRUATION

It is normal to have cycle lengths that deviate within 10 days.
Note the menstrual history: does the patient have irregular periods since menarche?

Watch out for

- Pelvic infection
- Polycystic ovarian syndrome
- Climacteric symptoms
- Anorexia.
- Pregnancy (threatened abortion)
- Thyroid dysfunction (either hyper- or hypo-)
- Prolactinoma

Investigations

- Thyroid function
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Refer when fertility is a problem.

MANAGEMENT OF OVARIAN CYST

Principles

- Determine whether the cyst is functional (usually regress after menses; can be safely reviewed after 1-2 cycles)
- Determine the risk of malignancy

Functional Cyst

A functional cyst is characterized by a clear thin wall cyst that:-

- has no solid area
- is less than 5 cm in diameter
- regresses after menses

Management

- Most functional cysts regress with expectant treatment.
- The risk of rupture is small, and that of malignancy is negligible.
- Monitor with U/S after menses 2 cycles later, OR
- Prescribe OC pills for ovarian suppression and repeat U/S after menses 2 cycles

Cysts for Surgical Treatment

An ovarian cyst unable to meet one or more of the above criteria for functional cysts usually requires surgical treatment.

EXCEPTION: Women undergoing fertility treatment (eg Clomiphene, ovulation induction injections, IVF, some Chinese medications) may have ovarian cysts larger than 5cm in diameter which usually resolve after stopping the fertility treatment. These patients should be advised to seek immediate medical attention if they experience sudden lower abdominal pain.

The new RCOG guidelines state that postmenopausal women with cysts satisfying above 3 criteria for functional cysts can be managed expectantly if their CA 125 < 35 mIU/ml. Laparoscopic salpingo-oophorectomy (unilateral or bilateral) is recommended if the cyst does not regress after 6 months. Please note that AGE is NOT as important a factor in determining the mode of treatment of ovarian cysts as it was in the past, when most gynaecologists would advise TAHBSO for a post-menopausal woman with an ovarian cyst.

Malignant Risk

One should raise the suspicion of malignancy if an ovarian cyst has the following features (in order of descending significance):

- Rule of 3mm: wall thicker than 3 mm OR septum in the cyst thicker than 3 mm
- Solid areas, papillary growth, morula nodule
- Cyst volume: (length x width x depth)/2 > 10 cm^3
- CA 125: the higher the level, the higher the risk
- Age: the older the patient, the higher the risk

MENOPAUSE

In Hong Kong, the life expectancy for women is now over 80, and since many more women have had oophorectomies, the problems associated with menopause have become extremely important issues to not only the gynaecologists but also the average GP.

Menopausal Symptoms

A good proportion of women entering menopause may experience hot flushes and other neuropsychological symptoms that may affect their quality of life. Vasomotor symptoms such as hot flushes and sweating are the symptoms that reflect the brain's response to hormonal changes during the climacteric, especially to fluctuating levels of oestradiol. The exact mechanism is still not absolutely certain. It is possibly related to the response of the thermo-regulation centre in the hypothalamus to physiological changes in the body. It usually gets better with time and patients should be reassured that, by itself, it does not impose any health threat and no medication is needed unless the symptoms are disturbing.

Other menopausal symptoms include changes in sleep, mood, and other mental performance. All these associated symptoms should be evaluated separately and managed. Just as the Women's Health Initiative (WHI) study shows, there are risks associated with the use of HRT.

Osteoporosis

Please refer to the chapter "Osteoporosis" in the section "Orthopaedics & Traumatology".

Cardiovascular & Cerebrovascular Diseases

Cardiovascular disease (CVD) is the leading cause of morbidity and mortality in menopausal women. It was thought that oestrogen deficiency and the associated dyslipidaemia after menopause are the causes. In vitro test suggests that there is a direct beneficial effect of ovarian hormones on the arterial endothelium. The reduction of oestrogen negatively influences the cardiovascular system.

Recent randomized controlled trials (eg HERS, WEST, and WHI Study) all showed that the risks are not reduced by HRT. Instead, the risks are increased in the early period (1-5 years) of using HRT, and long-term use of HRT showed more risks than benefits (WHI Study). In all age groups, the HRT users had more heart attacks, strokes and thrombo-embolism compared to those on placebo.

Medical Treatment

Symptomatic treatment

Oestrogen replacement therapy (ERT), HRT, clonidine or gabapentine can be tried to relieve the severe vasomotor symptoms. Short courses of oestrogen may help in women with serious urogenital symptoms. Psychiatrist's advice may be sought if the psychological symptoms are serious or worrying.

Anti-osteoporotic treatment

- HRT
- STEAR

- SERM
- Bisphosphonates
- Calcitonin
- Vitamin D and calcium
- Parathyroid hormone

Please refer to the chapter "Osteoporosis" in the section "Orthopaedics & Traumatology".

Raloxifene
This is a newer SERM that provides reasonable bone protection, favourable lipidaemia level, reduced cardiac attack and strokes especially in high risk patients. It also appears to have protective effects against breast cancer. Unless contraindication exists (eg breast cancer or thrombo-embolic phenomenon), raloxifene should be considered as it provides multiple advantages.

Phyto-oestrogens
Non-prescription remedies are becoming increasingly popular in the consumer market. The values of these products are heavily promoted by the commercial sector, manufacturers, and to those who have resistance to "prescribed medications". Phyto-oestrogens are a large family of products derived from plant. It is believed that these products possess various degrees of oestrogen activity. Food or food supplements containing phyto-oestrogens are often seen advertised as a safe alternative to HRT in the management of menopausal problems.

Soybean is a natural dietary source of isoflavones, which has oestrogen-like properties. Some preliminary studies suggest an antiosteoporotic effect of isoflavones. Isoflavones may increase HDL and decrease LDL concentrations and these effects may be beneficial in the prevention of arteriosclerosis. Although they have not been shown to benefit the post-menopausal urogenital tract, soybeans have been promoted as a replacement for HRT.

Other medications
Androgens and omega 3 fatty acids have not been proven scientifically to be beneficial or harmful. Until such data exists, physicians should be very careful when they counsel someone on the long-term and regular use of these drugs. It is not advisable to use the expensive yet unproven therapies as the possible side-effects from long-term administration are still uncertain. While some manufacturers claim their "natural products" are "free" of side-effects, consumers should know that:

- No medications, natural or synthetic, herbal or not, are without side effects.
- Lack of studies to prove the presence of side effects does not mean the absence thereof.
- Any decision to use or not use a particular medication must be made on the balance of risks versus benefits.

Lifestyle Change

In addition to the use of medications, healthy lifestyle is to be adopted. For example, menopausal ladies should have a healthy diet (more fibres, less fat and less saturated fat), regular exercises (but with attention that the exercises should not be stressful or damage the brittle skeleton), and lead a less stressful life or have a less stressful career. Smoking reduces the effect of oestrogen on bone metabolism (mediated by an adverse influence on sex-steroid metabolism) and should be stopped.

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PELVIC INFECTION

A single episode of pelvic inflammatory disease increases the risk of a future attack by 10 times and subsequent ectopic pregnancy by 7 times. It can cause tubal infertility, chronic pelvic pain and/or deep dyspareunia, and menstrual disturbances.

Commonest organisms

- Chlamydia
- Gonococcus
- Streptococcus
- Staphylococcus

Risk Factors

- Presence of IUCD
- Previous history of PID
- Multiple sexual partners

Symptoms & Signs

- Abdominal pain
- Dyspareunia
- Increased vaginal discharge
- Irregular vaginal bleeding
- Fever
- Nausea and vomiting
- Generalised malaise

Full gynaecological + speculum examination is required, look for the following:

- Evidence of STDs
- Inflammatory vagina
- Cervical excitation
- Abnormal PV discharge
- Bimanual tenderness/mass
- Take high vaginal, low vaginal, and endocervical swabs for bacterial / fungal smears and cultures

Treatment

- Ceftriaxone Disodium (*Broadced*) 250mg im stat, AND
- Doxycycline (*Doxymycin*) 100mg bd for 14 days, AND
- *Metronidazole* 400mg bd for 14 days.

Refer / consider hospital admission if

- The symptoms are severe, especially if they do not respond after 3 days of treatment.
- The patient is pregnant.
- A bimanual mass is felt.

TERMINATION OF PREGNANCY (TOP)

Basic Principles

- These cases need to be referred.
- The gynaecologist will perform a pelvic ultrasound on the patient to confirm the presence of an intra-uterine pregnancy.
- Before referral, perform pregnancy test in the clinic, even if the patient claims she has already done it herself.
- The most common indication for TOP is anxiety-complicating pregnancy (NOT unwanted pregnancy!).
- It is illegal to perform TOP beyond 24 weeks of gestation (unless the foetus is grossly abnormal).

Consent

- For a girl under 16 years of age, the parents should be consulted even if the patient objects to this. However, TOP should never be performed against the girl's wish even if her parents insist.
- It is not essential to obtain consent from the putative father, although it is advisable to discuss the matter with him.

Complications

- Immediate: trauma to the uterus, haemorrhage, sepsis…etc.
- Long term: tubal occlusion, cervical incompetence…etc.

VAGINITIS

Symptoms: Vaginal discharge +/- Vulvar itching +/- Vaginal odour.
Common causes: Bacterial vaginosis, Candidiasis, Trichomoniasis
Investigation: HSV for C&ST + M&T smear + culture
ALWAYS TREAT THE PARTNER AT THE SAME TIME.

Bacterial Vaginosis

This is the most common type of vaginitis. About half are due to Gardnerella. It usually occurs when the normal vaginal flora that produces Lactobacillus species is replaced with anaerobic bacteria. In pregnant patients, bacterial vaginosis is associated with adverse outcome of pregnancy.

- Metronidazole 400mg bd for 1 week
- Tetracycline 100mg/Amphotericin B 50mg (Talsutin) vaginal tab 1-2 hs for 2 weeks

Candidiasis

Vulvovaginal candidiasis can occur concomitantly with an STD or following antimicrobial therapy.

Oral medications: either one is effective

- Fluconazole (Diflucan) 150mg stat
- Ketoconazole (Yucomy) 400mg qd for 5 days
- Itraconazole (Itaspor) 200mg qd for 3 days

Local treatment: either one is effective

- Clotrimazole (Clozole) vaginal tab 500mg stat
- Tetracycline 100mg/Amphotericin B 50mg (Talsutin) vaginal tab 1-2 hs for 2 weeks
- Nystatin 100,000u vaginal tab hs for 2 weeks (especially in pregnancy)

Trichomoniasis

It is caused by the protozoan, *Trichomonas vaginalis*. It is transmitted sexually, yet men usually remain asymptomatic. The disease is characterized by a diffuse, malodorous, yellow-green discharge and vulvar irritation.

- Metronidazole 400mg bd for 1 week

"Blind" Treatment

Vaginitis is so common and readily treatable that investigations may not be indicated in the initial visit in a GP setting.

- Metronidazole 400mg bd for 1 week
- Ketoconazole (Yucomy) 200mg tab 1 bd for 5 days
- Chlorpheniramine 4mg tds for 3 days
- Tetracycline 100mg/Amphotericin B 50mg (Talsutin) vaginal tab 1-2 hs for 2 weeks

- Betamethasone + Clotrimazole + Gentamicin (Triderm) LA bd