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a better understanding
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Fertility Associates –
Leaders in Fertility



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THE HITCHHIKER'S GUIDE TO GYNAECOLOGY

Dr Phill McChesney

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Irregular Periods

- Irregular periods are a common presentation
 - There are traps for the unwary!

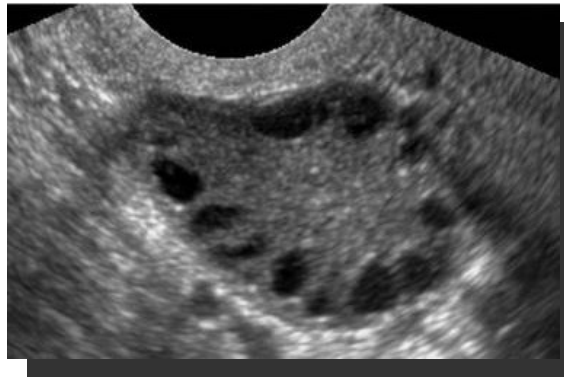


- Always exclude pregnancy



- Examination is mandatory
 - Include abdominal palpation
 - Include speculum examination if has been sexually active
 - Do a smear
 - Remember infection - Do swabs!

- Consider some tests
 - Bloods
 - Scan
 - Pipelle



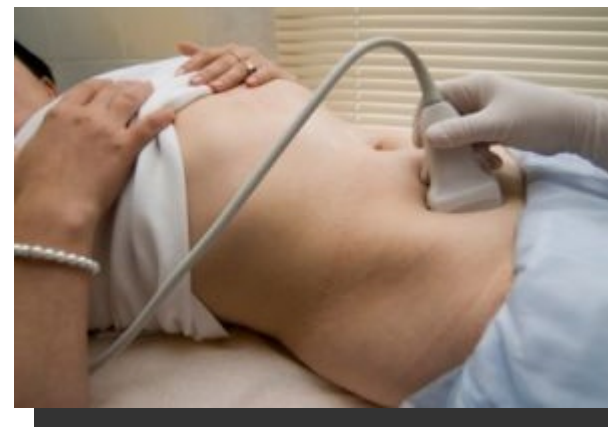
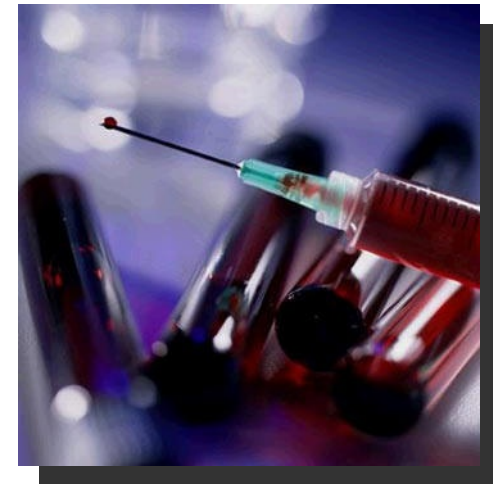
- Make a plan
 - Who to reassure
 - Who to treat
 - Very few women would not benefit from lifestyle advice
 - Who to refer

Teenagers with irregular periods

- Always exclude pregnancy and infection
- 1 year after menarche, periods should be regular
 - Hypothalamic amenorrhoea (oligo-ovulation)
 - Ask about diet, exercise and stress
 - PCOS
 - Look for hirsutism and acne

Teenagers with irregular periods

- Examination
- Bloods
 - FSH/LH (and always E2)
 - Testosterone
 - Prolactin
 - hCG
 - TSH
- Pelvic Ultrasound





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What's the diagnosis??



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- 18yr, irregular periods, sporty, BMI 22
 - FSH 35, LH 40
 - Critical missing info = E2 980
 - You just happened to catch a pre-ovulatory surge
 - E2 <50
 - This patient has premature ovarian failure

- 18yr, irregular periods, sporty, BMI 22
 - FSH 1.2, LH 1.1
 - E2 <50
 - Hypothalamic amenorrhoea
 - FSH 3.0, LH 4.2, E2 112
 - Could be hypothalamic
 - Could be PCOS
 - Need more information

PCOS

- PCO $\neq$ PCOS
- Rotterdam Criteria
 - 2 out of following 3
 - Oligo or anovulation (Irregular periods)
 - Clinical or biochemical evidence of hyperandrogenism
 - PCO on ultrasound
 - PLUS: exclusion of other causes
 - Androgen secreting tumor, CAH, Cushing's syndrome

PCOS on ultrasound

Specific ultrasound criteria

In one or both ovaries:

- ≥ 12 follicles 2-9mm in diameter
 - Absence of dominant follicle $>10\text{mm}$
- OR** Ovarian volume $>10\text{mls}$

But controversy still exists

- Peripheral follicle distribution still insisted on by some
- Suggested that volume cutoff be reduced to 7mls
- Must NOT be on COC
- Not to be confused with multicystic ovaries
 - normal at puberty or recovering hypothalamic



PCOS

- Treatment
 - Lifestyle
 - Lifestyle
 - Lifestyle



- Treatment
 - Lifestyle
 - Depends on issues
 - Wants pregnancy
 - Lifestyle
 - Consider Metformin
 - Refer to Fertility Specialist
 - » DO NOT PRESCRIBE CLOMIPHENE
 - Doesn't want pregnancy



- Treatment

- Lifestyle

- Depends on issues

- Wants pregnancy

- Doesn't want pregnancy

- Lifestyle

- Treat issues

- » Acne, hirsutism

- Protect endometrium

- Provide contraception where necessary



Women in 20s and 30s with irregular periods

- Always exclude pregnancy and infection
- History
 - Weight, exercise, acne, hirsutism
 - Post coital bleeding
 - Pain



- Examination
 - BMI, hyperandrogenism, BP, abdomen
 - Speculum (smear and swabs) $\pm$ pipelle
- Bloods
 - FSH/LH (and always E2)
 - Testosterone
 - Prolactin
 - hCG
 - TSH
- Pelvic Ultrasound



What's the diagnosis?

- 33yr, irregular periods
 - FSH 1.2 LH <1
 - E2 450
 - PRL 950
 - hCG 5000

- 33yr, irregular periods



- 33yr irregular periods
 - BMI 46



Irregular Periods in 40s

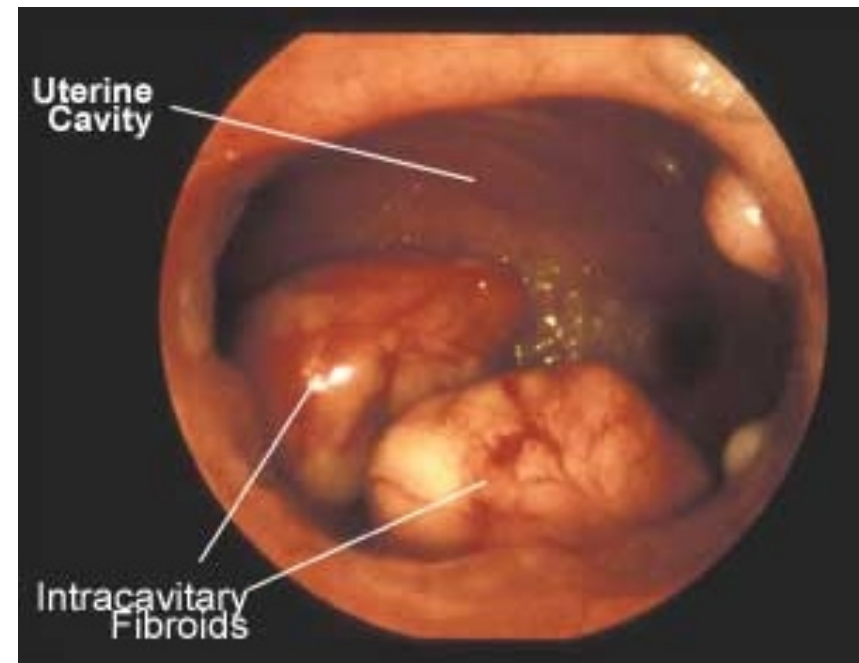
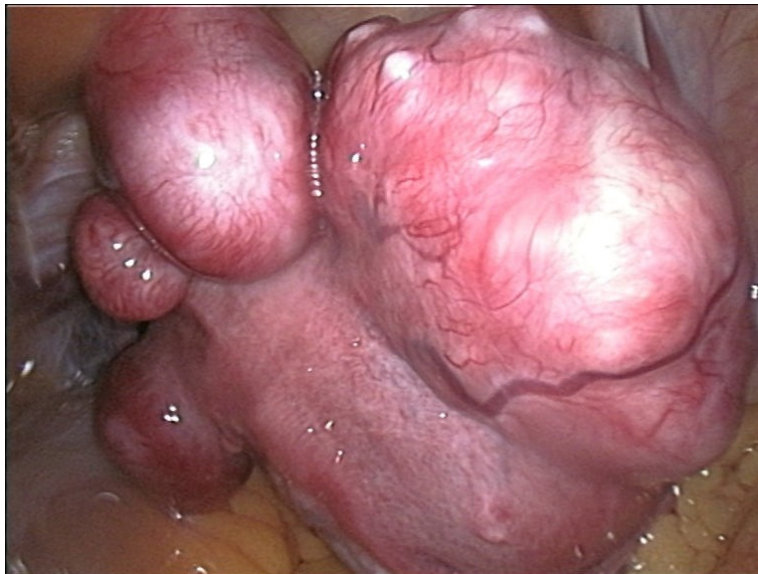
- Always exclude pregnancy and infection
- History
 - Post coital bleeding, intermenstrual bleeding
 - Pain
 - Menopausal symptoms
 - Pressure and prolapse

- Examination
 - BMI, hyperandrogenism, BP, abdomen
 - Speculum (smear and swabs) **± pipelle**
- Bloods
 - FSH/LH (and always E2)
 - Testosterone
 - Prolactin
 - hCG
 - TSH
- Pelvic Ultrasound



What's the diagnosis?

- 41yr, irregular periods



View of uterus through a hysteroscope

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- 41yr irregular periods
 - FSH 35, LH 25
 - E2 70
 - Peri-menopause
 - Consider:
 - Bones
 - Pregnancy
 - Symptoms
 - Implications for daughters!!

Hormonal Management of irregular periods

- Make a diagnosis
- Lifestyle
- COC
- Mirena
- Cyclical progesterone
- Hormonal bleeding always stops with progesterone
 - But will restart on withdrawal

Top Tips on Irregular Periods

- Exclude pregnancy and infection
- Always look at the cervix
- Teenagers should have regular cycles 1 year post menarche
- Remember hypothalamic amenorrhoea
- PCOS most common cause
- Consider endometriosis
- Early referral in women wanting pregnancy

Period pain



Period Pain

- Symptoms of possible pathology
 - Worsening with age
 - Not controlled with simple analgesia
 - Diagnosis of irritable bowel syndrome
 - Pay attention to history
 - Does it get worse with menses
 - Mid-cycle pain
 - Dyspareunia
 - Dyschezia
 - Bladder irritability in a nulliparous woman

- Examination
 - Always do VE
 - (unless never sexually active)
 - Often feel tethering or thickening in POD or utero-sacral ligaments with endo
 - Often reproduce pain with endo
 - Nodules are obvious and often exquisitely tender
 - Fixed retroverted uterus and nodularity more common in older women c.f. early 20s
 - May be no signs of endo
 - Endo is a laparoscopic diagnosis
 - Swabs for infection

- Treatment
 - Don't fob off
 - Often have put up with pain for some time
 - Diagnostic laparoscopy only way to diagnose endometriosis
 - Consider previous treatments, severity, age and fertility wishes, desire to avoid surgery
 - NSAIDS
 - Hormones

- Hormones

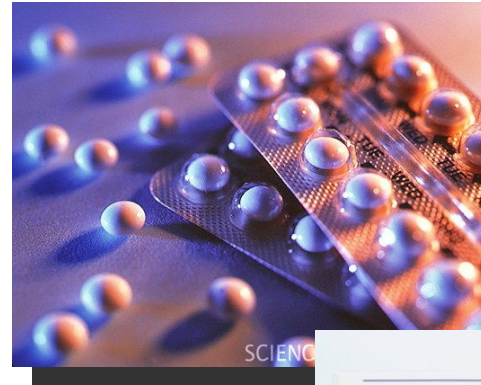
- COC

- Tricycling likely to help
 - Probably all equally effective

- DMPA

- Consider issues of delay in return to fertility and adverse side effects

- Mirena



Heavy Bleeding



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- Risk factors for hyperplasia
 - Age ≥ 45 yr
 - Weight ≥ 90 kg
 - Nulliparity
 - History of Infertility
 - Exposure to unopposed estrogen or tamoxifen
 - Family History
 - HNPCC
 - Endometrial cancer

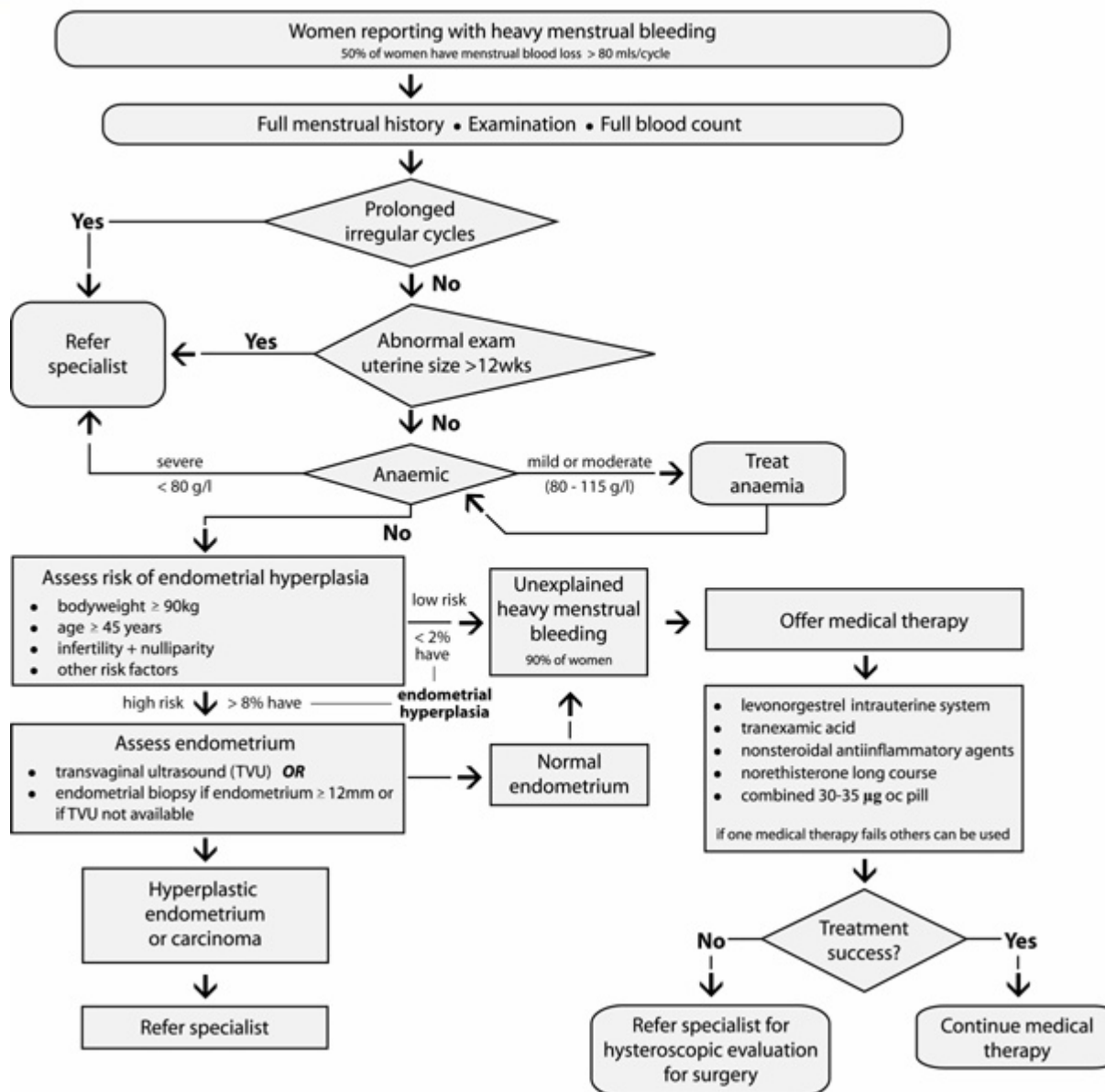
- Who to scan
 - Women with risk factors for hyperplasia
 - Abnormal clinical examination
 - Prolonged irregular bleeding
- Who to pipelle
 - ET ≥ 12 mm on TVS
 - Consider in women with risk factors for hyperplasia

- Other investigations
 - CBC
 - Iron studies
 - Consider coagulation screen
 - History of other abnormal bleeding
 - Heavy bleeding from onset of menses

- Who to refer
 - Hb <80
 - Intermenstrual bleeding or prolonged irregular bleeding
 - Uterus >12/40 size on examination
 - Irregular bleeding despite hormonal treatment in women with normal examination
 - Abnormal endometrium on pipelle biopsy
 - Inadequate response to medical treatment



Management of Heavy Menstrual Bleeding



Treatment

- Mirena
 - Excellent results
 - Fit and forget
 - Excellent contraception
 - Very few contraindications
 - Definitely ok for nulliparous women, BUT often severe crampy pain in first 12 hours after insertion
 - Very few side effects
- Tailor treatment to patient desires...



- Reduced HMB and cycle regularity
 - Progesterone 3 weeks every 4
 - Medroxyprogesterone acetate (Provera)
 - 2.5 to 30mg daily (once a day usually works fine)
 - Lower potency than NE and usually better tolerated
 - Norethisterone
 - 10-30mg daily (usually once a day works fine)
 - More effective than MPA but more side effects
 - Progesterone at these doses is very likely to be contraceptive, but cannot be relied upon



- Reduced HMB and cycle regularity / contraception / treating dysmenorrhoea / PMS
 - Combined oral contraceptive pill
 - Probably all equally effective



- **Reduced HMB and contraception and/or dysmenorrhoea**
 - Mirena
 - Remember to exclude infection and potential pregnancy prior to insertion
 - Usually very easy to insert
 - Local gynae department should be happy to give you some practice if necessary





- Reduced HMB **and** dysmenorrhoea **and/or** headaches **and/or** non-hormonal method
 - NSAIDS
 - Probably all equally effective
 - Need to start 24-48hrs before bleeding starts
 - Take for 3-5 days

- Reduced HMB with non-hormonal therapy
 - Tranexamic Acid (Cyclokapron)
 - 1-0 - 1.5g po tds 4 days each period during heaviest bleeding



SCIENCEphotOLIBRARY

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PMS



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PMS

- “a condition which manifests with distressing physical, behavioural and psychological symptoms, in the absence of organic or underlying psychiatric disease, which regularly recurs during the luteal phase of each menstrual (ovarian) cycle and which disappears or significantly regresses by the end of menstruation”
- Estimated prevalence of severe PMS 3-30%
 - More in obese, less exercise, lower academic achievement

- **Symptoms**

- Mood swings
- Irritability
- Depression
- Feeling out of control
- Breast tenderness
- Bloating
- Headaches
- Reduced visuospatial and cognitive ability
- Increase in accidents



- Treatment

- Lifestyle:

- Exercise
 - Diet (low GI)
 - Stress reduction



- Consider complementary therapies

- Difficult to assess true value
 - Best data appears for:



- Vitamin D
 - Magnesium
 - Calcium
 - Agnus castus



- Refer psychiatrist if marked underlying psychopathology
 - Symptom diaries to assess treatment

– Cognitive Behavioural Therapy

- Slower onset of improvement but better maintenance of treatment effect compared to SSRIs
- Can be difficult to access and expensive

– SSRIs

- 1st line pharmacologic therapy
- Serotonin is implicated in the pathogenesis
- Meta-analysis confirms efficacy
- Seem to improve physical symptoms as well
- Luteal phase use as effective as continuous

– Combined oral contraceptive pill

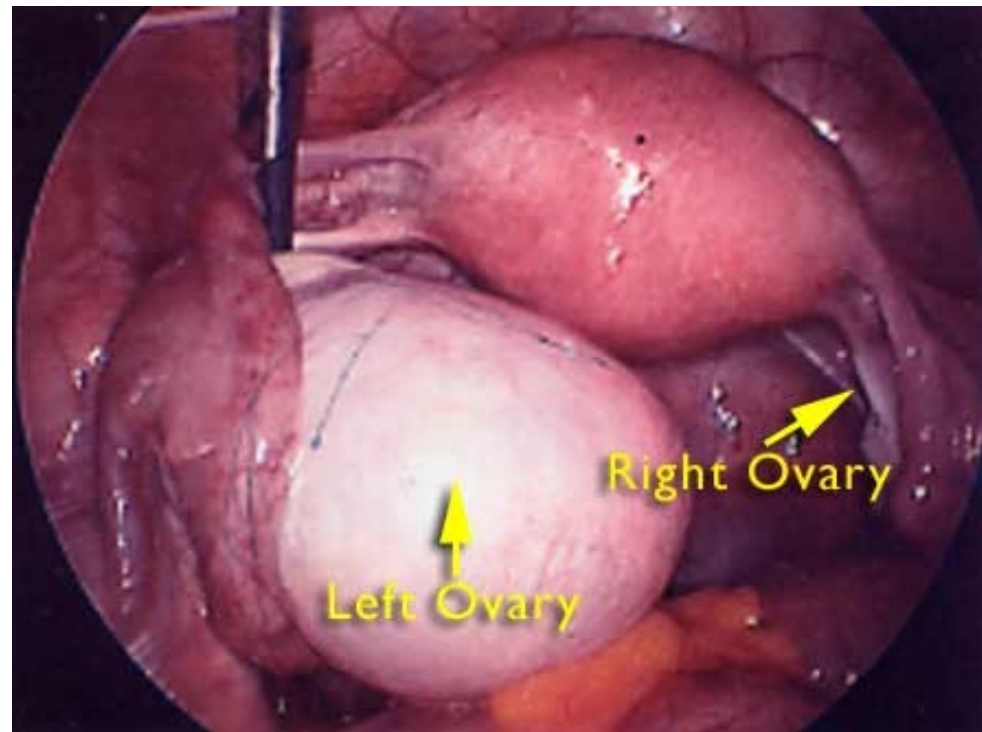
- Second generation pills not shown to benefit in RCTs
 - Probably due to progesterone types (LNG and NE)
- Newer pills may be effective
 - Yasmin (drospirenone = anti-androgenic and anti-mineralocorticoid properties)
 - » Benefit demonstrated in RCT
 - Continuous rather than cyclically

– Percutaneous Estradiol (patch or implant)

- Efficacy shown in RCT
- Not contraceptive – need barrier or IUCD
- Need progesterone added for endometrial protection
 - Mirena probably best
 - Progesterone pessaries at least 10/7 per month

- GnRH analogues
 - 2nd or 3rd line only
 - Lack of efficacy suggests questionable diagnosis
 - Add back hormone therapy recommended due to hypoestrogenic effects
 - Continuous combined HRT
 - Tibolone
 - Meta-analysis confirms efficacy
- Hysterectomy & bilateral salpingo-oophorectomy
 - Last resort
 - Should have GnRH analogue trial first to ensure improvement in symptoms

Premenopausal Ovarian Cysts



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Premenopausal Ovarian Cysts

- Up to 10% of women will have surgery for an ovarian mass
- In premenopausal women, almost all ovarian masses are benign
 - Functional cysts
 - Endometriomas
 - Serous or mucinous cystadenoma
 - Mature teratoma (Dermoid)
- Risk of a symptomatic ovarian cyst in premenopausal being malignant - 1:1000 → 3:1000 by age 50yrs
 - Germ cell tumour
 - Epithelia carcinoma
 - Sex-cord tumour
 - Secondary malignancy (predominantly breast and GI)



Premenopausal Ovarian Cysts

- 10% of suspected ovarian masses are ultimately found to be non-ovarian in origin
 - Paratubal cyst
 - Hydrosalpinges → 
 - Tubo-ovarian abscess
 - Peritoneal pseudocysts
 - Appendiceal abscess
 - Diverticular abscess
 - Pelvic kidney
- Many ovarian masses can be managed conservatively
 - Function/simple cysts <5cm usually resolve over 2-3 menstrual cycles
 - They are identified as being thin walled cysts without internal structures
 - However, up to 20% of borderline tumours appear as simple cysts on USS

Premenopausal Ovarian Cysts

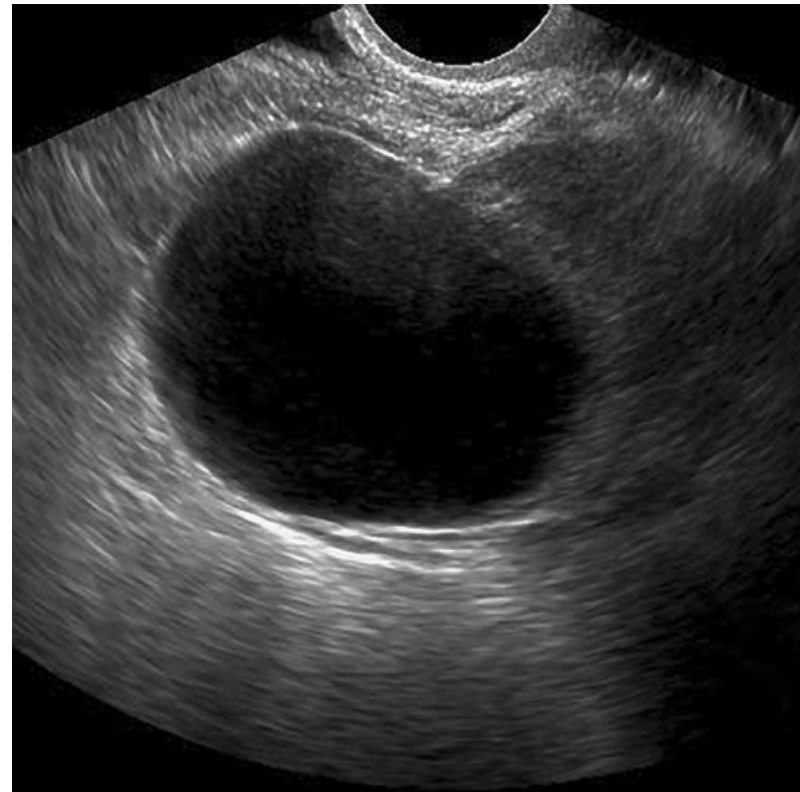
- History
 - Symptoms or family history suggestive of endometriosis
 - Dysmenorrhoea, Dyspareunia, Dyschezia
 - Risk factors of ovarian malignancy
 - Family hx Breast or ovarian cancer (colon, prostate)
 - Symptoms of malignancy
 - Persistent abdo distention, appetite change including increased satiety, pain, increased urinary urgency +/- frequency
 - Acute presentation with pain
 - Torsion
 - Rupture
 - Haemorrhage

Premenopausal Ovarian Cysts

- Tests
 - LDH, α -FP, hCG
 - in all women <40yrs with complex mass
 - CA-125
 - Not necessary if USS = simple cyst
 - Beware common conditions causing premenopausal elevation
 - Endometriosis, fibroids, adenomyosis, pelvic infection

Premenopausal Ovarian Cysts

- Transvaginal Ultrasound
 - Best imaging
 - Other modalities may be required in complex cases
- Risk of Malignancy Index (RMI)
 - Estimates risk using ultrasound, menopausal status and CA-125 level
 - May be used by gynaecologist to determine optimal treatment



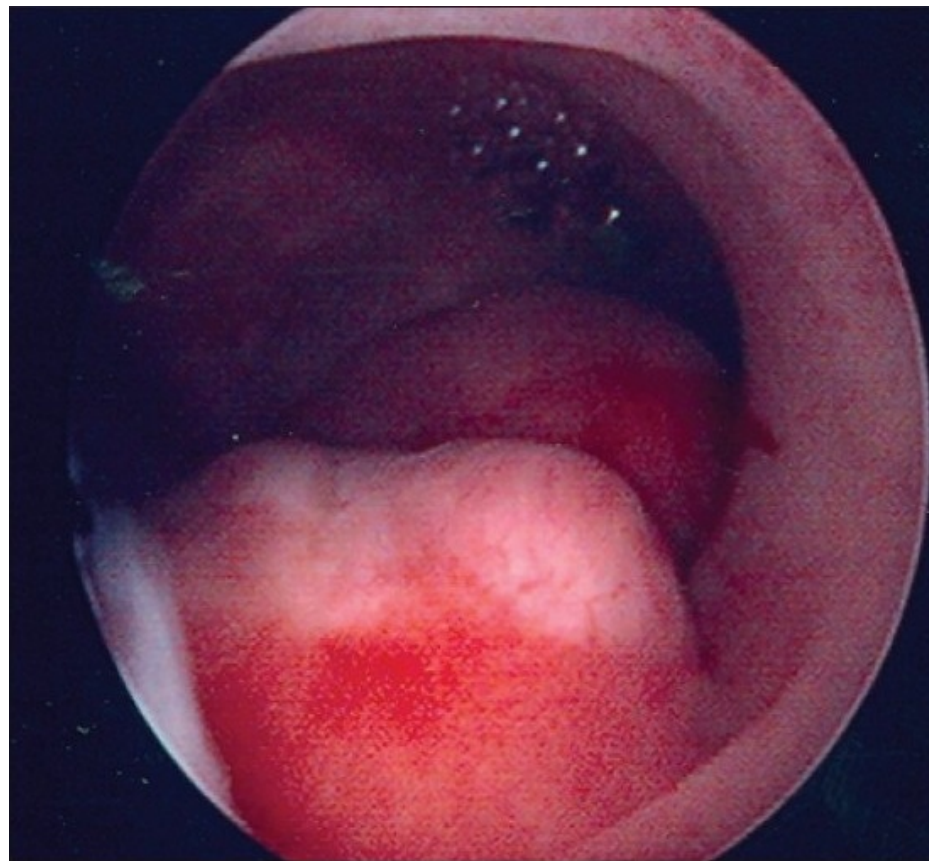
Premenopausal Ovarian Cysts

- Asymptomatic simple ovarian cysts
 - <50mm → no follow-up
 - Almost all resolve within 3 menstrual cycles
 - 50-70mm → annual TVS
 - >70mm → refer for further imaging or surgery
- Persistent ovarian cysts
 - Unlikely to be functional
 - Refer for surgery (with pre-op RMI)
 - Cysts <50mm may be followed conservatively

Premenopausal Ovarian Cysts

- Summary
 - Malignancy is uncommon
 - LDH, a-FP and hCG if complex and <40yr
 - CA-125 often raised in benign conditions
 - Asymptomatic simple cysts <50mm → no follow up
 - Refer symptomatic, persistent, or >50mm

Post-menopausal Bleeding



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Post-menopausal Bleeding

- Endometrial cancer is the worrying aetiology
 - Most cases occur in 6th and 7th decades
 - Lifetime risk = 1.1%
 - Vaginal bleeding is presenting symptom in >90%
- Hysteroscopy D&C +/- directed biopsy has largely replace fractional D&C as gold standard investigation
- >90% will have a benign underlying cause

- Odds of cancer after a negative TVS (ET <5mm) are only 1/10th of the odds before scan
- Advanced endometrial cancer can occur without noticeable endometrial thickness on USS
- Largest study of ET in PMB (Karlsson et al 1993)
 - Mean ET endometrial cancer = 21.1mm
 - No malignancies <5mm
 - Unable to measure in 2.8% of women
 - Estimated risk of finding malignancy <5mm by TVS = 5.5%

- Another study (Gull et al 2000)
 - 0.6% prevalence of endometrial cancer if ET <4mm
- Probability of cancer increases with increasing ET on scan
 - 1 in 5 will have cancer if ET>9mm
 - 1 in 2 will have cancer if ET>13mm

- Van Doom et al 2008
 - PMB with $ET \leq 4\text{mm}$ → expectant management
 - 10% had recurrent bleeding
 - Median time to recurrence = 49 weeks (9-196)
 - Of those who rebleed → 8% had endometrial cancer
 - » (95% CI 2.2-25%)
 - Conclusions
 - Recurrence rate of bleeding is low
 - Recurrence should be investigated due to possible cancer

What does this all mean?

- History
 - Risk factors
 - Subfertility, Nulliparity, Obesity, Family history, HRT, tamoxifen
- Examine
 - Check cervix
 - ? Signs of vaginal atrophy
 - Uterine size
 - Consider Pipelle

- Investigations
 - TVS
- What now?
 - Normal scan and pipelle → reassure
 - Refer if re-bleed
 - Normal scan and no pipelle → ??
 - Consider referral, discuss and document
 - Refer if re-bleed
 - Abnormal scan and/or pipelle → refer

Vulval Skin Disorders



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Vulval Skin Disorders

- 1/5 women have significant vulval symptoms
- Possible causes
 - Vulval dermatoses
 - Infection
 - Contact dermatitis
 - Hormone deficiency
 - Systemic skin disorders

- History

- Symptoms at other sites
- Risk factors for VIN 
 - Abnormal cervical cytology, smoking, immunodeficiency
- Potential allergens
- Personal and family history of:
 - Autoimmune conditions
 - More common in lichen sclerosis and erosive lichen planus
 - Thyroid, alopecia areata, pernicious anaemia, Type I DM, vitiligo
 - Atopy
- Symptoms of urinary or faecal incontinence
 - Very irritating and can cause skin damage



- Common allergens
 - Cosmetics
 - Fragrances
 - Preservatives in topical treatments
 - Textile dyes
 - Soap
 - Washing powder
 - Fabric conditioners
 - Sanitary towels/panty liners
 - Scented toilet paper
 - Synthetic underwear

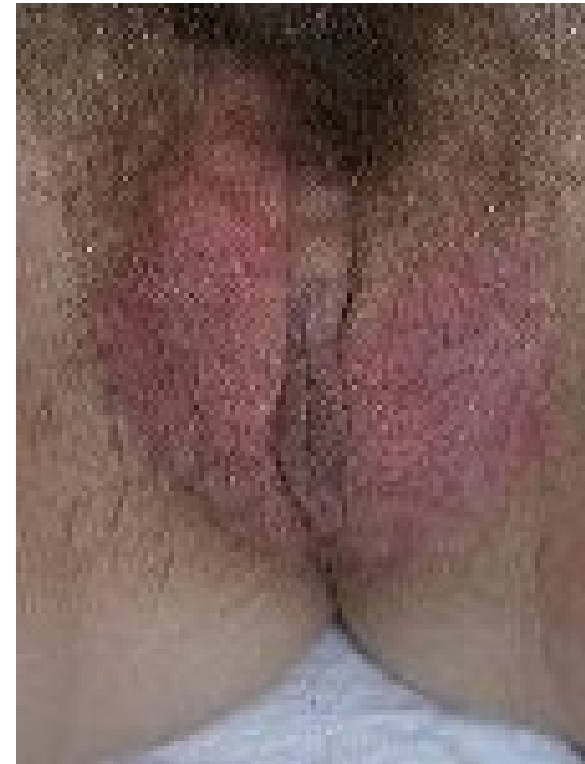


- Examination
 - Good light
 - Smear if due or VIN suspected
 - Check other skin and mucosal sites
- Investigations
 - Consider:
 - TSH
 - GTT
 - Swabs for infection
 - Ferritin - 20% with vulval dermatitis have iron-deficiency anaemia
 - Correction can relieve symptoms

- Treatment
 - Suspected vulval dermatoses or suspicious lesion should be referred to gynaecologist
 - VIN
 - Lichen Sclerosis
 - Lichen Planus
 - Vulval cancer
 - Remove potential allergens
 - Avoid soap and detergents
 - Use soap substitute



- Lichen simplex chronicus
 - Common
 - Severe pruritis, especially at night
 - Non-specific inflammation
 - Labia Majora, extending to mons and thighs
 - Erythema, swelling, lichenification
 - Vuval care and avoid irritants
 - Soap substitutes
 - Antihistamines or antipruritics
 - Moderate or ultrapotent topical steroid to break itch-scratch cycle



- Vulval candidiasis
 - Irritation and soreness of vulva and anus
 - Diabetes, obesity, antibiotic use
 - Prolonged antifungals may be necessary
 - Oral may be better to avoid irritative dermatitis
 - NB: Fluconazole contraindicated in pregnancy



A word on thrush....

- Recurrent “thrush” is often not candidiasis
- Always take a swab
- Institute vulval hygiene advice
- Avoid topical treatment if possible
- Treating male partners does not help
- Suppression therapy
 - 50mg fluconazole daily for 2/52
- Maintenance therapy
 - 150mg fluconazole po weekly for 6/12
 - 90% successful, but 40% relapse 6/12 post treatment



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Prolapse

**DON'T
PANIC**

The Hitchhikers Guide to Gynaecology



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Prolapse

- History
 - Bulge
 - Pelvic heaviness
 - Pelvic Pressure
 - Sensation of “sitting on something”
 - Low back pain
 - Symptoms often worsen during day
 - Urinary Symptoms
 - Incontinence - may be getting better
 - incontinence with intercourse
 - Recurrent infection
 - Incomplete emptying, difficulty starting



- Bowel symptoms
 - Incontinence (flatus, liquid/solid, rectal soiling)
 - Constipation
 - Incomplete evacuation
- Sexual symptoms
 - Dyspareunia
 - Introital gaping
 - Vaginal dryness
- Past history clues: big babies, forceps, bad tears

- Examination
 - Check length of perineum & for gaping of vulva
 - Get patient to push down and see if anything prolapses
 - Cusco speculum with patient supine is fine
 - Look at the cervix
 - Get patient to push down as removing speculum
 - Does the cervix follow?
 - Break the speculum to make into modified Simms
 - Look at anterior and posterior walls with patient pushing

- Bimanual examination
 - Size of uterus
 - Adnexal pathology
 - Pelvic floor tone
- Stage 1 prolapse is normal post delivery and unlikely to cause any significant symptoms

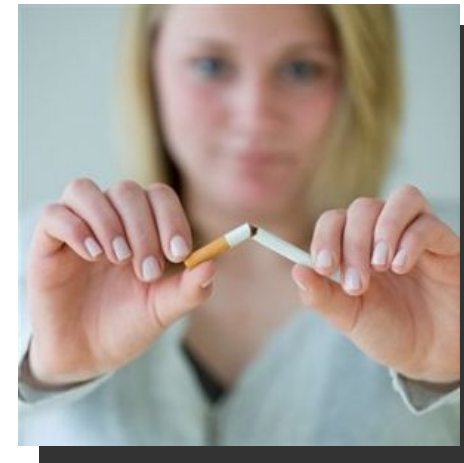


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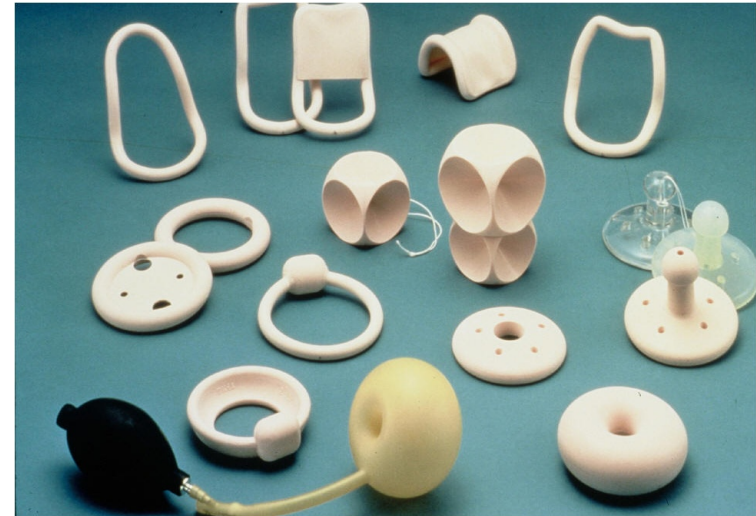
- Best classification = POPQ
 - Challenging if you don't do it often
 - Can be confusing
- Simplest Classification = Baden-Walker Halfway System
 - 0 = No prolapse
 - 1 = Halfway to hymen
 - 2 = To hymen
 - 3 = Halfway past hymen
 - 4 = Maximal descent
 - Everyone will know what you are talking about!
 - Great Resource: www.bardmedical.com/POPQ
 - Also has iphone App !!

- Investigations
 - Consider TVS if concerned about
 - rapidity of onset
 - Adnexal pathology
 - Uterine size
- Treatment
 - Lifestyle
 - BMI
 - Smoking
 - Constipation
 - Pelvic floor exercises
 - May improve mild prolapse
 - Will improve surgical results



- Pessaries

- Hundreds of different types
 - Ring and Shelf most common in NZ
 - Great for people who want to avoid surgery
 - Should be changed every 6 months



- Surgery

- Greatly debated topic
 - Hysterectomy is probably NOT the answer
 - Except if uterus significantly increased in size
- Mesh or not mesh????

- Pessary Issues

- Minimised by encouraging vaginal estrogen cream
- Discharge
 - Take swab
 - Treat organism
 - Consider increasing vaginal estrogen
 - If blood stained → need to remove (please take a note of size)
 - Look for source of bleeding with speculum
 - » If no source seen → work up for PMB
 - Ulceration → Probably treat with vaginal estrogen
 - » Pessary can be reinserted in a few weeks (look first!)
 - » Refer if doesn't resolve in a few weeks



- Recurrent urinary infection
 - Lack of vaginal estrogen
 - Treat with estrogen cream
 - Ring too big
 - Change size
- Worsening incontinence
 - Surgery probably the answer
- Difficulty with bowel movements
 - Size may be wrong
 - Surgery often the answer
- Interfering with intercourse
 - Surgery probably the answer



- No reason you shouldn't continue to care for pessaries if you want
- If you need to be taught or a refresher...
 - Contact your local gynae clinic!

Take home messages



- Gynaecology is EASY
- Always examine your patient
- Women <60 are pregnant until proven otherwise



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42

THE MEANING OF LIFE

I know, I don't get it either!!!

\o/ MotivatedPhotos.com

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