Family Day in Medicine
Dr. Gillian MacMullin, MD, FRCPSC
MENOPAUSE FOR THE FAMILY PHYSICIAN

DISCLOSURES

- Member of Royal College Council
- Chair of Regional Advisory Council, Region 5 (RCPSCS)
- No industry disclosures
- Nothing off-label**

OBJECTIVES

- At the conclusion of this presentation, participants will be able to…
- • Define and apply the appropriate diagnostic criteria for menopause when ordering tests.
- • Demonstrate a comprehensive understanding of dosing considerations to optimize hormone replacement therapy effectiveness.
- • Develop a systematic approach to investigate and understand the underlying causes when menopausal symptoms persist despite hormone replacement therapy.

WHAT – AND WHEN - IS MENOPAUSE?

MENOPAUSE

- "permanent cessation of menstruation resulting from the loss of ovarian follicular activity"
- A stage in a woman's reproductive career
  - NOT a disease state
  - NOT pathological
  - NOT abnormal
- Average age = 51-52 years

PERIMENOPAUSE

- The period before menopause extending through to the first year after menopause
- Defined as persistent change of 7 days or more in consecutive cycles
  - In early menopause, cycles often shorten
  - In late menopause, cycles space out by intervals of 60 or more days
- Vasomotor symptoms often start in late menopause
- Ongoing risk of pregnancy in perimenopause, with 25% of cycles being ovulatory

PREMATURE OVARIAN INSUFFICIENCY

- Amenorrhea and *consistently* elevated FSH in women under 40
- Potential for spontaneous reversal
- Refer to gynecology

DIAGNOSING MENOPAUSE

- ***One year of amenorrhea***
- Onset of menopausal symptoms in the setting of a prior hysterectomy

NOTE: LH, FSH, estradiol, and progesterone are ***NOT*** used to diagnose menopause in women > 40.

COMMON GYNECOLOGIC CONCERNS

- AUB
  - Must rule out endometrial cancer (therefore refer to gynecology)
- Symptoms of hypoestrogenism
  - Vasomotor symptoms (“hot flashes)
  - Sleep disturbance
  - Mood symptoms
  - Genitourinary symptoms of menopause

RISKS OF HYPOESTROGENISM

- Osteoporosis
- Cardiovascular disease
- Cognitive decline

SCREENING

- Breast cancer
- Colorectal cancer
- Bone density
- Cervical cancer
  - No previous dysplasia and no hysterectomy? Discontinue at age 70 years.
  - No previous dysplasia and hysterectomy? No more Paps needed.
  - Previous dysplasia? Continue with annual Paps for life.

VASOMOTOR SYMPTOMS OF MENOPAUSE

"HOT FLASHES"

- Narrowing of the thermoneutral zone
- Typically last for < 7 years, but 15% of women have hot flashes for > 15 years
- Symptoms:
  - Sweating
  - Anxiety
  - Palpitations
  - Apprehension
  - Flushing

DIFFERENTIAL DIAGNOSIS FOR NIGHT SWEATS:

- Anxiety or panic disorder
- Hypertension
- Emotional flushing
- Chronic fatigue syndrome
- GERD
- Mastocytosis
- Rosacea
- Sleep apnea
- Temporal arteritis
- Idiopathic hyperhidrosis
- Neurologic flushing*
- Deconditioning
- Malignancy*
- Reactions to food, drug, or alcohol
- Medications*
- Infection*
- Substance withdrawal
- Endocrine disorders*

MEDICATIONS CAUSING NIGHT SWEATS:

- Antidepressants
- Triptans
- Antipyretics
- Cholinergic agonists
- GnRH agonists
- Aromatase inhibitors
- Flutamide
- SERMs
- Hypoglycemics
- Sympathomimetics
- And more…

DIFFERENTIAL DIAGNOSIS OF FLUSHING:

- Menopause
- Hot drinks
- Emotional distress
- Anaphylaxis
- Alcohol
- Medications*
- Carcinoid syndrome
- Systemic mastocytosis
- Malignancy*
- Diencephalic seizures
- POTS

WORK-UP

- CBC
- TSH
- CRP
- 24h urine for 5-HIAA, metanephrine, and catecholamines
- HIV and HCV serology
- TB testing
- Blood culture
- CT or U/S
- Echocardiogram
- Bone marrow biopsy

MANAGEMENT

- Lifestyle modifications
- Non-prescription medications
- Prescription medications
  - Hormonal
  - Non-hormonal

LIFESTYLE MODICIATIONS

- Reduce core body temperature
- Regular exercise
- Weight management
- Smoking cessation
- Avoid triggers (eg. heat, stress, alcohol)

NON-HORMONAL MEDICATIONS

Non-hormonal

- Clonidine
- SSRIs/SNRIs
- Gabapentin
- Pregabalin

HORMONE REPLACEMENT THERAPY

RISKS AND BENEFITS

Benefits

- Reduced VMS
- Reduced insomnia*
- Improvement in mood*
- Reduction of aches and pains
- Prevention/treatment of osteoporosis
- Decreased hip fractice
- Decreased colorectal cancer
- Less heart disease
- Lower overall mortality

Risks:

- VTE
  - 4x increase
- Stroke
  - 1.3RR increase
- Breast CA
  - 1.3RR increase
- CHD (> 10 years post menopause)
- Endometrial hyperplasia and cancer

THE BREAST CANCER THING

- 1.3RR increase in breast cancer…
  - Same increase in risk as
    - Having more than one drink a day
    - Being obese
    - Having early menarche
    - Having late menopause,
    - Being sedentary.
- Absolute increase of 2-3 breast cancer cases per 5000 women

SIDE EFFECTS

- Estrogens:

  Headaches

  Nausea

  Mastalgia

  Bloating

  Progesterones:

  Mood changes

  Mastalgia

  Bloating

  Fatigue

  Changes in lipids

  Sedation

CONTRAINDICATIONS TO HRT

- Estrogens:
  - Unexplained vaginal bleeding
  - Liver dysfunction
  - Estrogen-dependent cancer (breast or endometrial)
  - Previous heart attack or stroke
  - Active VTE
- Progesterones:
  - Unexplained vaginal bleeding
  - Progesterone-dependent breast cancer
  - Peanut allergy

WHAT TO GIVE

- Estrogen + progesterone:
  - MUST give progesterone if there is a uterus present
  - Progesterones alone don't do anything for symptoms
- Estrogen alone

ROUTE OF ADMINISTRATION

- Oral:
  - Lower serum estrone and estradiol
  - Increased HDL and TGs
  - Higher risk of VTE

- Transdermal:
  - More consistent blood levels
  - No first pass effect
  - No VTE risk
  - Possibly lower stroke risk

CYCLIC VS. CONTINUOUS

- Cyclic:
  - Continuous estrogen with 12-14 days of progesterone
  - Gives cyclic bleeding
- Continuous
  - Daily dosing
  - Achieves amenorrhea

MONITORING

- Annual evaluation
  - Review risk/benefits
  - No need to taper: abrupt vs. tapering = similar recurrence in VMS

TROUBLESHOOTING

- Bleeding?

  Refer to Gyne.

- No benefit:
  - Ensure compliance
  - Change route
  - Check serum estradiol (200-400pmol/L)
  - Rule out other causes.

ANDROGEN THERAPY

- Evidence for psychological benefits and sexual function
- None approved for women in Canada yet

“BIOIDENTICAL HORMONES”

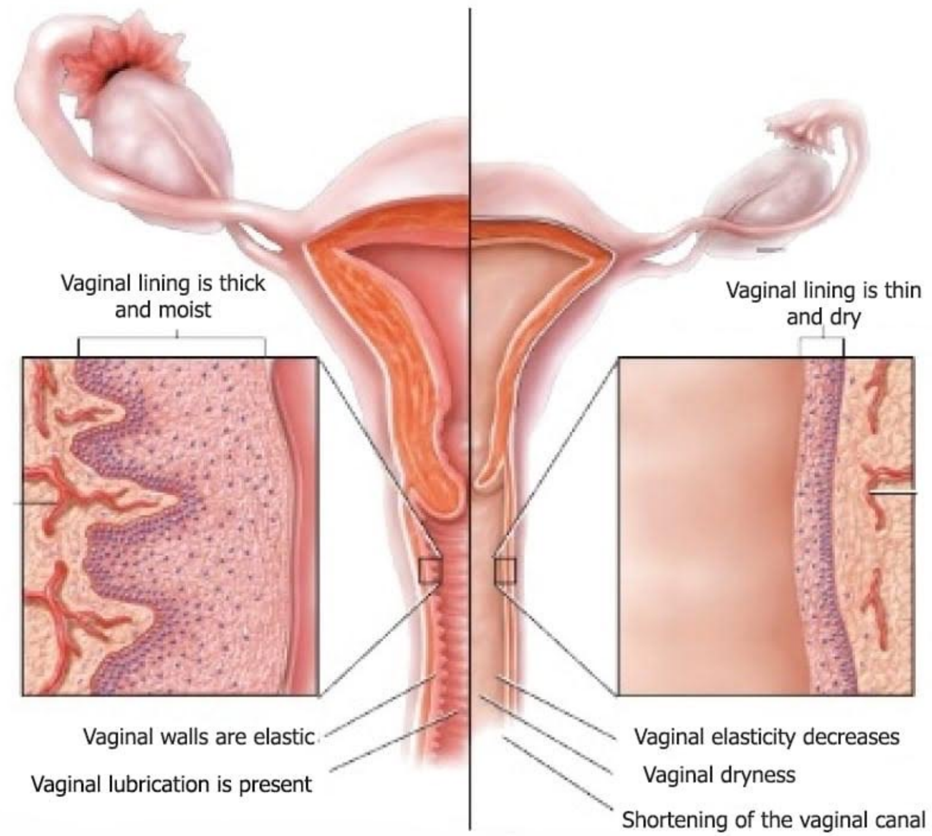
"BIOIDENTICAL HORMONES"

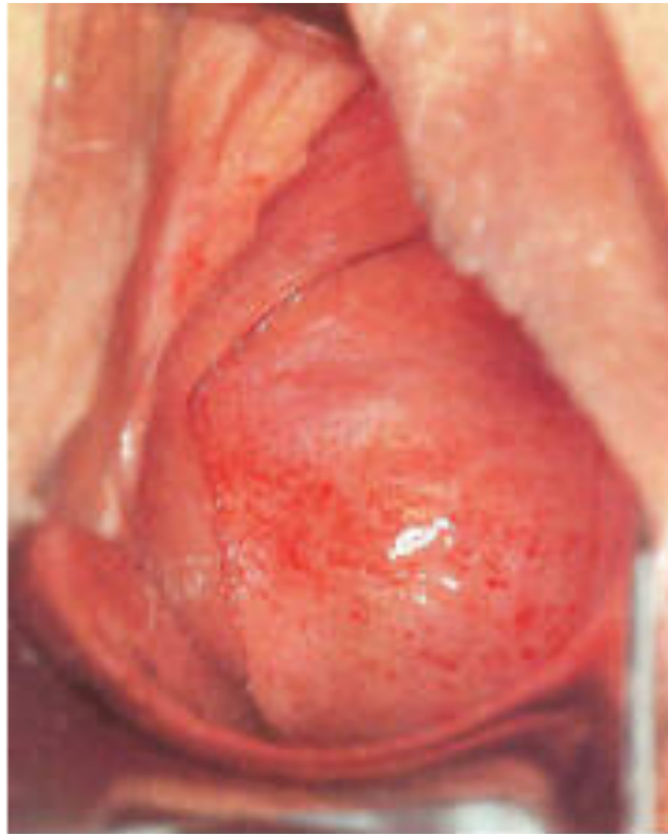
- Not a thing.
- *Actually* chemically identicaly:
  - Every single transdermal estrogen
  - Estrace
  - Prometrium

GENITOURINARY SYMPTOMS OF MENOPAUSE

GUSM

- Sexual dysfunction
  - Dyspareunia
  - Hypoactive sexual desure
  - Postcoital bleeding
- Urologic conditions
  - Incontinence
  - Overactive bladder
  - Recurrent UTI
- Lower genital tract
  - Vaginitis
  - Vulvitis
  - Vulvar dryness
  - Vaginal dryness
  - Vulvodynia


Healthy Vagina
Vaginal Atrophy
Vaginal lining is thick and moist
Vaginal lining is thin and dry
Vaginal walls are elastic
Vaginal lubrication is present
Vaginal elasticity decreases
Vaginal dryness
Shortening of the vaginal canal



Picture Showing Features of Atrophic Vaginitis

MANAGEMENT OF VAGINAL ATROPHY

- Lubricants and moisturizers
- Vaginal estrogen
- Vaginal DHEA-S
- Vaginal laser

VAGINAL ESTROGEN

- Conjugated equine estrogen cream (*Premarin*)
- Estrone vaginal cream (*Estragyn*)
- Low-dose estradiol-releasing ring (*Estring*)
- Micronized estradiol vaginal suppository (*Vagifem*)

No generics available in Canada!

Very low systemic absorption so no increased risk endometrial hyperplasia and safe in breast cancer patients.

- No need for progestin co-therapy with vaginal estrogen

Avoid in patients on aromatase inhibitors if the goal is absolute absence of systemic estrogen

VAGINAL PRAESTERONE

- DHEA-S (testosterone and therefore estrogen precursor)
- 6.5mg PV daily
- Less data available, but good option if estrogens contraindicated/patients unwilling to take estrogens

SLEEP

- Management:

  Treat hot flashes

  Sleep hygiene and

  CBT

  Relaxation Tx

  Medications

THANK YOU!