Post-Reproductive Gynecology
Goals & Objectives

• By the end of this lecture (as long as you stay awake) you should be able to:
  – Discuss the physiologic changes that happen to women as they move through the menopausal transition
  – Describe routine preventive care for post-reproductive women
  – Recognize common gynecologic issues in post-reproductive women with some understanding of diagnosis and treatment options
  – Evaluate post-reproductive woman for pelvic functional and relaxation and list treatment options
Demographics

- **Life expectancy, 2007**
  - total population: 78.00 years
  - male: 75.20 years
  - female: 81.00 years

- Census statistics from 2000 - 2006
  - Total US population increasing from 283 million to 299 million
  - Women increasing from 143 million to 151 million
  - Women, 40 years and older increasing from 64 million to 71 million
  - 43% of the total increase in our population is **women over 40**
Case Presentation 1

**Chief Complaint:** TDR is a 53 year old, G2P2 with a LMP of 12 mos ago complaining of hot flashes, emotional difficulties, and inability to sleep. Also due for annual exam

**History of Present Illness:** 1+ year hx of hot flashes occurring 2-3 times per day and occasionally at night; also having trouble sleeping for the past 6 months and is extremely fatigued. She denies any vaginal bleeding. She also notes that recent attempts at sexual activity with her husband have been quite painful. She begins to cry in your office.
Additional History

PMH: significant for HTN controlled on diuretic past 5 years
Allergies: None known
Meds: HCTZ
PSH: Appy as teen, tubal ligation after last delivery 25 yr ago
Gyn Hx: 2 years ago menses became less regular and lighter til lmp 12 mo ago, sexually active with her husband p 30 yrs, monogamous
    No hx abnl pap
Social: no tobacco, 1-4 drinks/week, no drug abuse, safe at home, works as Administrator in Ob Gyn Department
Family: Mom with broken hip at age 75 which prompted nursing home adm
    Sister with breast cancer dx at age 60
Physical Exam

Vital signs: 165 pounds, 5’5” 140/90 mm Hg

Neck
  No thyromegaly, mass or lymph nodes

Breast
  No discharge or nipple retraction
  No palpable masses

Abdomen
  No masses, hernia, hepatosplenomegaly or tenderness

Pelvic
  EXT: Normal external genitalia but labia shiny, retracted.
  Spec: Vagina slightly atrophic with decreased rugae, cervix clear
  Mild anterior relaxation at rest, Introitus admits 2 fingers tightly
  Biman: Uterus small and anteverted; neither ovary is palpable on bimanual exam
DIAGNOSIS??????
Objective 1

Discuss the physiologic changes that happen to women as they move through and past the menopause transition
Effects of Aging on Reproductive Physiology

Figure 1. Stages/nomenclature of normal reproductive aging in women

<table>
<thead>
<tr>
<th>Stages:</th>
<th>-5</th>
<th>-4</th>
<th>-3</th>
<th>-2</th>
<th>-1</th>
<th>0</th>
<th>+1</th>
<th>+2</th>
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<tbody>
<tr>
<td>Terminology:</td>
<td>Reproductive</td>
<td>Menopausal Transition</td>
<td>Postmenopause</td>
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<tr>
<td></td>
<td>Early</td>
<td>Peak</td>
<td>Late</td>
<td>Early</td>
<td>Late*</td>
<td>Early*</td>
<td>Late*</td>
<td></td>
</tr>
<tr>
<td>Duration of Stage:</td>
<td>variable</td>
<td>variable</td>
<td>variable</td>
<td>③ 1 yr</td>
<td>④ 4 yrs</td>
<td>until demise</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Menstrual Cycles:</td>
<td>variable to regular</td>
<td>regular</td>
<td>variable cycle length (&gt;7 days different from normal)</td>
<td>≥2 skipped cycles and an interval of amenorrhea (≥60 days)</td>
<td>Amenorrhea x 12 mos</td>
<td>none</td>
<td></td>
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<tr>
<td>Endocrine:</td>
<td>normal FSH</td>
<td>↑ FSH</td>
<td>↑ FSH</td>
<td>↑ FSH</td>
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*Stages most likely to be characterized by vasomotor symptoms.
Symptoms of Peri-Menopause/Menopause

• Hot flashes (flushes) and Night Sweats= vasomotor Symptoms
• Vaginal dryness
• Possible Mood Fluctuation and Sleep Disturbance (especially if have more severe Vasomotor Symptoms)
• Menstrual irregularity and eventual cessation
Other Common Symptoms—Maybe “hormones”, maybe not

- Depression/Anxiety
- Palpitations
- Pelvic pain
- Non vasomotor symptom related sleep disturbance
- Joint pain
- What else is there?
- Oh Yes- Memory issues
Effects of Menopause (and aging) on Reproductive Organs

- Vulva/Vagina
  - atrophy
- Pelvic Support
  - loss of elasticity
  - deterioration in smooth muscle function
- Cancer Risks Increase
  - Breast
  - Vulvar and Vaginal
  - Ovarian
  - Uterine
Some Effects of Menopause (and aging) on other Organ Systems

- Increased risk CAD
- Bone density declines and fracture risk increases after menopause
- General skin collagen changes- wrinkles happen!
- Possible memory changes, especially word retrieval
- Fat distribution changes from Pear to Apple shape
TAKE HOME POINT FOR OBJECTIVE 1

• Estrogen receptors are everywhere—cessation of ovarian function effects many organ systems, not just reproductive organs

• Changes in menstrual patterns with eventual cessation, onset of vasomotor symptoms and eventual atrophy symptoms are most obvious signs of menopause in most women
Objective 2

Describe routine preventive care for post-reproductive women
Back to our patient, what labs/tests would you order?

• Routine screening tests what would you check?
  – Pap, mammogram, fbs and lipids-All normal

• Tests prompted by symptoms?
  – CBC, TSH

• IF you got Follicle Stimulating hormone (FSH), what would you expect?
  – Elevated
DID WE MISS ANYTHING??
Preventive Gynecologic Care in Post-reproductive Women

History

– breast problems
– vaginal or vulvar symptoms (bleeding, pain, dryness irritation, discharge)
– abdominal or pelvic problems (pain, bloating)
– incontinence (urinary or fecal)
– domestic abuse screening
– assessment of other primary care (other primary provider or just Gyn; vaccinations)
Preventive Gynecologic Care in Post-reproductive Women

Physical exam

Vital Signs – Height/Weight/BMI, Pulse, BP, General appearance
  – Thyroid
  – Lymph Node survey
  – Breasts
  – Heart/lung exam
  – Abdomen (mass, tenderness, hepatosplenomegaly)
  – Vulva (attention to atrophy)
  – Vagina/Cervix (attention to atrophy)
  – Bimanual to assess uterus and ovaries and pelvic floor support
  – Recto/vaginal exam
  – Skin Check
Preventive Gynecologic Care in Post-reproductive Women

Laboratory/Imaging Studies

- Pap smear
- Mammography
- Lipid profile
- Colon cancer screening
- Diabetes screening
- Thyroid function evaluation
- Consider bone density (osteoporosis) screening - when to start??????
Preventive Gynecologic Care in Post-reproductive Women

Counseling

– Diet & exercise
  • Calcium(1200-1500mg/day, diet the best), vitamin D(600-1000IU/day), weight bearing exercise

– Sexuality
  • Anticipatory guidance and screening for current libido issues (this is more complicated), vaginal dryness- sexual function issues

– Vasomotor Symptoms
  • anticipatory guidance and screening regarding triggers, possible treatments
TAKE HOME POINTS FOR OBJECTIVE 2

• Periodic screening for colon cancer, diabetes, hyperlipidemia and breast cancer begins in the 40+ yo woman.

• The menopause transition is an opportunity to reinforce general good health practices—when age hits you in the face you may be more likely to listen.
Objective 3

Recognize common gynecologic issues in post-reproductive women with some understanding of diagnosis and treatment options
Luckily our patient doesn’t have these but-

- Suppose she had complained of “irregular bleeding”
Abnormal Bleeding

- What do we want to know about bleeding?
  - Pre or post-menopausal
  - Cyclic vs. irregular
  - Location
    - Vulvar
    - Vaginal
    - Cervical
    - Uterine

- Evaluation
  - Exam
  - Laboratory & Imaging
    - Recent pap smear?
    - Biopsy of suspicious lesions of vulva/vagina/cervix
    - Endometrial biopsy
    - Pelvic ultrasound
Ultrasound of uterus
Ultrasound of uterus
What can we do about her sexual function issues?

- First, explain that while certainly not pleasant, this is a NORMAL and TREATABLE part of menopause.
- Encourage her to discuss the problem and intimacy in general with her husband - for many women, romance becomes EVEN MORE important after menopause.
ATROPHY/ATROPHIC VAGINITIS

• One of most common problem Gyn visit in > 65 population
• Symptoms experienced by over 40% of postmenopausal women
• Presents as
  – Dyspareunia
  – Discharge
  – Burning pain
  – Urinary urgency/frequency
• Caused by
  – lack of estrogen influence on urogenital tissues
  – Lower third of vaginal has highest concentration of estrogen receptors of anywhere in the body
Lab Diagnosis

Wet mount useful to rule out other pathogens

Look for high proportion of basal and parabasal cells and few if any superficial cells

Vaginal pH increased (>5 when atrophy present)
Atrophic Vaginitis
Treatment

- Most effective treatment is vaginal estrogen
- 3 options for vaginal delivery
  - Cream
    - Conjugated Equine Estrogens (Premarin)
    - Estradiol (Estrace)
  - Estradiol containing ring (Estring)
  - Estradiol vaginal tablet (Vagifem, 25 mcg)
- Minimal absorption at recommended doses
- Serum Estradiol level possible to reassure patients that no systemic absorption but not necessary
<table>
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<th>Treatment Options</th>
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<tr>
<td>Vagifem</td>
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<tr>
<td>Premarin cream</td>
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<tr>
<td>Estring</td>
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<tr>
<td>Lubricants</td>
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</table>
And what about those hot flashes???

Don't think of it as hot flashes. Think of it as your inner child playing with matches!
“Treatment” of Menopause

In the past ....

- long-term (more than five years) unopposed estrogen (ET) and combined estrogen-progestin therapy (hormone therapy [HT]) routinely prescribed for treatment of symptoms and
- For prevention
  - coronary heart disease (CHD)
  - osteoporosis
- extensive observational data demonstrated protective effect of estrogen on the heart and bone
Treatment of Menopause

Women's Health Initiative - 2004

- Large prospective randomized controlled trial
- Healthy postmenopausal women ages 50 to 79
- Primarily a trial of primary prevention of cardiovascular disease
- Showed increased risk of breast cancer, CHD, stroke, and venous thromboembolism with combined estrogen & progestin therapy
- Showed no cardiovascular benefit with unopposed estrogen
- Follow-up analyses suggest that the excess CHD risk occurs in older, but not younger postmenopausal women
Hormonal Treatment of Menopause

• Risks include
  – coronary heart disease events
  – stroke
  – venous thromboembolism
  – breast cancer
  – breast tenderness and vaginal bleeding
  – possible increased risk of dementia or no effect

• Benefits include
  – reduction of fracture and colorectal cancer rise
  – significant decrease in hot flushes, vaginal dryness, joint pains/stiffness and general aches and pains when compared to placebo
TAKE HOME POINTS FOR OBJECTIVE 3

- The transition to menopause is normal, symptoms can be bothersome, bleeding differences (once you rule out serious pathology) and vasomotor symptoms are temporary.
- Whether or not to treat symptoms is an individual decision for every woman, we can assist by reviewing symptoms, long term risks and benefits for each individual patient.
- Atrophy symptoms are very common, do not tend to resolve without treatment and can be treated locally.
- The “management” of menopause is a work in progress.
NOW, BACK TO OUR PATIENT!

Management/Plan:

1. Educate regarding normal menopause symptoms, expectations and natural history of the course of symptoms
2. Encourage good self care-taking (enough sleep and exercise, stress reduction techniques like meditation, yoga, adequate dietary calcium (1200-1500mg) and vitamin D (600-1000IU))
3. Discuss hormonal medical options- treat vasomotor symptoms/ vaginal symptoms or both!
   1. Risks?
   2. Benefits?
   3. Delivery Options?
4. Discuss non-hormonal management
   - Does dietary phyto-estrogens like soy work?
   - Black Cohosh
   - Triggers to avoid
What else?

• Consider alternative dx such as depression for mood issues
• Follow up to be sure treatment effective
• If HT elected, review treatment periodically and eventually consider trying to decrease/dc systemic HT
Objective 4

Evaluate post-reproductive woman for pelvic relaxation and function and list treatment options
Chief Complaint: EMJ is a 72-year-old woman G4P4 presents complaining of “fullness” in the vaginal area.

History of Present Illness: The symptom is more noticeable when she is standing for a long period of time. She does not complain of urinary or fecal incontinence. She has no other urinary or gastrointestinal symptoms. There has been no vaginal bleeding.
More History

- **PMH:** Her past medical history is significant for well-controlled hypertension and chronic bronchitis.
- **PSH:** None except 4 SVD with episiotomy and repair for first 2 deliveries
- **Meds:** HCTZ
- **Allergies:** Hay fever, NKDA
- **Social History:** Smokes 5-10 cigs a day (trying to quit), 3 drinks/week, Retired OR nurse, spends lots of time gardening, married, long term monog relationship, safe at home
Physical Exam & Labs

- Neck, breast and abdominal exam normal
- Pelvic exam
  - normal appearing external genitalia except for generalized atrophic changes
  - vagina and cervix are without lesions
  - second-degree Cystocele and Rectocele are noted
  - cervix descends to introitus with the patient in an erect position
  - no rectal masses noted with rectal sphincter tone slightly decreased
  - uterus is normal size; right and left ovaries are not palpable
- Labs / Studies:
  - urinalysis and post-void residual
  - No evidence of UTI and post void residual normal at 35 cc.
DIAGNOSIS????
Pelvic Floor Relaxation

- Women have 11% risk of having surgery for incontinence or prolapse symptoms by age 80
- Pelvic floor relaxation is the most common indication for hysterectomy in women over 55
- Treatment indicated for symptoms BUT
- Most women with prolapse are asymptomatic
Pathophysiology

- The support of the pelvic floor is composed of a network of muscles, fascia and ligaments.
- Damage to any one of these structures may result in weakening and loss of support.
- Pelvic prolapse (“pelvic relaxation”) may lead to symptoms of pressure, fullness, urinary and/or fecal incontinence, need for vaginal splinting.
Types of Pelvic Relaxation

• Cystocele and Urethrocele
• Rectocele
• Uterine Prolapse or Procidentia
• Vaginal Vault Prolapse
• Enterocele
Cystocele Symptoms

- Pelvic or Vaginal Pressure
- Dyspareunia
- Dragging or drawing vaginal sensation
- Urinary Incontinence
- Difficulty emptying the bladder, sometimes requiring splinting
- Frequent UTI
- Distension cystocele
  - Central defect
  - Note absence of rugal folds
Rectocele Symptoms

- Vaginal Pressure or Discomfort
- Protrusion coming from the posterior wall
- Constipation
- Difficulty evacuating rectum (“splinting)
- Dyspareunia
Total prolapse of the bladder and uterus to the outside of the body
Back to our patient...

• **Management:**
  1. Educate patient regarding findings with some information on natural history and risks and complications with observation only
  2. Discuss options for management, both non-surgical and surgical

• **Plan:**
  1. Patient prefers non-surgical option
  2. Pessary placed and vaginal estrogen used to address atrophic changes
  3. Good bladder habits and pelvic floor exercises discussed
  4. ENCOURAGE SMOKING CESSATION!!
A Friend is Like A Good Bra...

Hard to Find
Supportive
Comfortable
Always lifts you up
Makes you look better

And Always
Close To Your Heart!!!
Non Surgical treatment

• Pelvic Floor Rehabilitation
• Pessaries
  – Supportive
  – Space occupying
  – Be sure to use with vaginal or systemic estrogen with postmenopausal women
  – Should be removed and cleaned at least every 2-4 months by patient or clinician
Pessaries

- Press against the walls of the vagina and are retained within the vagina by the tissues of the vaginal outlet
- May cause vaginal irritation and ulceration
- Are better tolerated when the vaginal epithelium is well estrogenized

- Should be removed periodically, cleaned and reinserted
- Failure to do so may result in serious consequences, including fistula formation
- Patients may be managed successfully with a pessary for years