Geriatric Sexual Dysfunction

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% Sexually Active if in Spousal or Intimate Relationship

<table>
<thead>
<tr>
<th>Age Group (yr)</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>57–60</td>
<td>65-74</td>
<td>75-85</td>
</tr>
<tr>
<td>61–65</td>
<td>79</td>
<td>84</td>
</tr>
<tr>
<td>66–70</td>
<td>85</td>
<td>74</td>
</tr>
<tr>
<td>71–75</td>
<td>84</td>
<td>74</td>
</tr>
<tr>
<td>76–80</td>
<td>85</td>
<td>74</td>
</tr>
<tr>
<td>81–85</td>
<td>79</td>
<td>84</td>
</tr>
</tbody>
</table>

Lindau ST et al, NEJM 2007; 357:8
Most common sexual problems

• Men
  – Own health causing sexual inactivity 55%
  – Difficulty achieving/sustaining erection 37%
  – Lack of interest in sex 28%
  – Climaxing too quickly 28%
  – Performance anxiety 27%
  – Inability to climax 20%

• Women
  – Male partner’s health causing sexual inactivity 64%
  – Lack of interest in sex 43%
  – Difficulty with lubrication 39%
  – Inability to climax 34%
  – Sex not pleasurable 23%
  – Pain with intercourse 17%

Lindau ST et al, NEJM 2007; 357:8
Sexual Assessment

• Review of systems: “What concerns do you have about your genital or sexual health that you’d like to talk about?”

• Assessment
  – Is the problem with desire, arousal, orgasm, specific sexual practices?
  – Onset, duration, precipitating event (biological or situational)?
  – Partner with sexual or health problems?
  – Are there other problems in the relationship?
Sexual Dysfunction and Vaginal Atrophy

• Vulvovaginal symptoms – dryness, burning, irritation, dyspareunia - reported by 10-40% of post-menopausal women

• Vaginal changes from estrogen loss
  – Decrease in secretions and lubrication
  – Decline in collagen and adipose tissue
  – Walls thinner, less elastic
  – Mucosal irritation and friability
  – Atrophy of clitoral prepuce

• Caveat: not all dyspareunia is vaginal atrophy; need to establish when and where pain occurs by Hx, PE

Hypopigmented, smooth, shiny epithelium
Petechiae
Patchy erythema
Friability
Cystocele

Other signs: retracted prepuce, flattened rugae, clitoral shrinkage, introital stenosis, posterior synechiae
Treatment of Symptomatic Vulvovaginal Atrophy
North American Menopause Society Position Statement

• First line therapy
  – Non-hormonal lubricants and vaginal moisturizers in combination with regular sexual activity
    • Water-based (glycerin, PEG - not long lasting)
    • Silicone (eg, K-Y®)
    • Natural oils (avocado, olive, peanut – can stain)
    • Polycarbophil (Replens®)

• Second line therapy
  – Topical, minimally-absorbed vaginal estrogen

NAMS. Menopause 2007;14:357
### Local Vaginal Estrogen Treatments

<table>
<thead>
<tr>
<th>Formulation</th>
<th>Product</th>
<th>Dosing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estradiol cream</td>
<td>Estrace®</td>
<td>2-4 gm/d x 1-2 wk, then 1 gm/d</td>
</tr>
<tr>
<td>Estradiol ring</td>
<td>Estring®</td>
<td>Change q3 mos</td>
</tr>
<tr>
<td>Estradiol tablet</td>
<td>Vagifem®</td>
<td>1 tablet/d x 2 wk, then 2x/wk</td>
</tr>
<tr>
<td>Conjugated equine estrogen</td>
<td>Premarin®</td>
<td>2-4 gm/d x 1-2 wk, then 1 gm/d</td>
</tr>
</tbody>
</table>

- Ultra-low dosing appears effective, possibly safer
- Most common adverse effects: vaginal bleeding and breast tenderness
- *Any* bleeding requires complete evaluation in women with uterus present
Erectile Dysfunction

• Prevalence increases with age
  – Risk 3-fold higher with DM
  – Risk 2-fold higher with obesity

• Etiology
  – Vascular
  – Neurogenic
  – Hormonal
  – Anatomic
  – Medication
  – Psychological

• Men with ED have 75% increased risk of CAD; lead time between ED and CAD ~3 yr
Medications Associated with ED

- Anticholinergics
- Anticonvulsants
- Antidepressants
- Antihistamines
- Antihypertensives
- Anti-Parkinsonian
- Diuretics
- Opiates
- Hypnotics

- Antipsychotics
- Hormones (estrogen, 5α-reductase inhibitors)
- Digoxin
- Alcohol
- Illicits
- Methotrexate

Heidelbaugh JJ. Amer Fam Phys 2010
McVary KT. NEJM 2007
# ED: Recommendations for Practice

<table>
<thead>
<tr>
<th><strong>Recommendation</strong></th>
<th><strong>Level of Evidence</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnostic testing should be limited to fasting glucose, lipid panel, TSH, AM testosterone</td>
<td>C</td>
</tr>
<tr>
<td>First line therapy is phosphodiesterase type 5 (PDE) inhibitors</td>
<td>A</td>
</tr>
<tr>
<td>PDE5 inhibitors most effective in men with DM, SCI, or ED associated with antidepressant use</td>
<td>A</td>
</tr>
<tr>
<td>Second line therapy: psychosocial therapy; testosterone supplementation if hypogonadal</td>
<td>B</td>
</tr>
<tr>
<td>Testosterone supplementation in hypogonadal men improves ED and libido</td>
<td>B</td>
</tr>
<tr>
<td>Consider screening for cardiovascular risk factors and/or disease</td>
<td>C</td>
</tr>
</tbody>
</table>

Heidelbaugh JJ. Amer Fam Phys 2010
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<thead>
<tr>
<th>Drug</th>
<th>Dose</th>
<th>Time btwn dose and intercourse</th>
<th>Onset</th>
<th>Duration (for successful erection)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sildenafil (Viagra)</td>
<td>50 - 100 mg</td>
<td>1 hr</td>
<td>14 - 60 min</td>
<td>Up to 4 hr</td>
</tr>
<tr>
<td>Tadalafil (Cialis)</td>
<td>10 - 20 mg</td>
<td>1 – 12 hrs</td>
<td>16 - 45 min</td>
<td>Up to 36 hr</td>
</tr>
<tr>
<td>Vardenafil (Levitra)</td>
<td>10 – 20 mg</td>
<td>1 hr</td>
<td>25 min</td>
<td>Up to 4 hr</td>
</tr>
</tbody>
</table>

- Although NNT small (2-3), approximately one-third of men do not respond
- All agents similarly effective
- Contraindicated with nitrates
- Common ADE: headache (10%), flushing, dyspepsia, rhinitis, vision change
- Rare but serious ADE: syncope, anterior optic neuropathy

Heidelbaugh JJ. Amer Fam Phys 2010
Testosterone Supplementation in Men

• Hypogonadal men (AM testosterone level < 300 ng/dL [10 nmol/L])
  – Large effect on libido (effect size 1.31), nonsignificant effects on satisfaction with erectile function and overall sexual satisfaction

• Men with low or normal testosterone
  – Small effect on satisfaction with erections, no significant effect on libido or overall sexual satisfaction

• Most useful in men with low T levels and vasculogenic ED, with efficacy inversely related to T level

  Isidori A et al. Clin Endocrin 2005
T Adverse Effects

• Meta-analysis of ADEs in older men
  – Combined rates of all prostate events significantly greater with T vs placebo (OR = 1.78 [95% CI, 1.07-2.95])
  – Rates of prostate cancer, PSA >4 ng/ml, and prostate biopsies were numerically but not statistically higher with T than with placebo group
  – Significantly higher rates of erythrocytosis (Hct >50%) (OR = 3.69 [95% CI, 1.82-7.51])

• Drug interactions: warfarin, prednisone (incr ADEs/effects); propanololol (decrease efficacy)

One Recommended Approach in Elderly Men

Determine if T is low

Total T < 200-300

In obese men, use free T

Measure LH

High

Low/Normal

Evaluate for secondary hypogonadism (TSH, prolactin, cortisol)

Topical T treatment

Efficacy: T 300-450 ng/dL, sx improvement

Monitor

Gel 25-100 mg/d
Patch 2.5-5 mg/d

ADEs

CBC

Lipids

Adapted from Snyder PJ. NEJM 2004
Testosterone Supplementation in Women

• Most studies in younger postmenopausal women
• 300 µg patch (but not 450 µg patch) significantly increased number of self-reported sexually satisfying events per month
  – Not effective in women with high SHBG (eg, obese) or on estrogen therapy
  – Low serum T not predictive of response
  – Not FDA approved

• Extensive controversy over T effect on cancer or CAD risk

Davis SR and Nijland EA. Drugs 2008
Shifren J et al. Menopause 2006