Alternative medicine and the perimenopause

An evidence-base review

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Perimenopause (1)

- **Definition**: the period immediately before menopause when endocrinologic and biological and clinical features of approaching menopause commence and the first year after menopause. (3 to 5 years before and 1 year after the cessation of menstrual flow)

- **Median onset**: 47.5 years of age
Perimenopause (2)

Biological changes

• The number of oocytes reach very low levels, from 1-2 million at birth to only a few thousands.

• The menstrual cycle begins to vary, typically the cycle shortens from one menses to the next.

• The levels of FSH increase - one of the first signs of reproductive aging

• Ovarian production of estradiol, progesterone and testosterone levels decrease with the onset of true menopause.

• Although hormone levels will eventually decrease, lower estrogen levels aren’t experienced until six months to one year before true menopause.

• The lower levels of estrogen are no longer adequate to cause a build-up of the uterine lining and there is not enough tissue to produce a menses.
Perimenopause (3)
Possible symptoms

- Decrease frequency of menstrual periods
- Hot flashes
- Night sweats
- Insomnia and fatigue
- Irritability and mood swings
- Forgetfulness
- Depression
Complementary and alternative medicine (CAM)

- Includes an array of systematic practice that rely on physical assessments and physiologic constructs, which work beyond the confines of allopathic practice.
- Provides so many options (acupuncture, herbes, nutritions, meditations...), whereas conventional medicine seems to have one limited offering: drug
Classification of CAM

- Alternative systems of medical practice
- Bioelectromagnetic applications
- Diet, nutrition, and lifestyle changes
- Herbal medicine
- Manual healing
- Mind-body control
- Pharmacologic and biological treatment
Tendency:

At least 42% of Americans sought care from health practitioners other than allopathic physicians (Eisenberg et al, 1993), and the percentage use today is even higher.

46% medical doctors in swiss use CAM for themselves (Domenighetti et al 2000).
Botanical medicine

• Denotes foods and supplements made from any plant part (leaves, stems, flowers, fruits, seeds and roots). Herbal defines the medicine from herbaceous portions of plants, namely leaves and stems.

• 30% of current pharmacopoeia derived from old plant medicine.

• Provides a number of important actions in reproductive systems (estrogenic, progestational, androgenic, and antiestrogenical activity.)
Abnormal bleeding in the perimenopause

Three phase of change in menstrual flow:

• The amount of flow and the cycle length change.
• There is cycle irregularity without skipping cycles
• Irregularity is further exacerbated with skipped cycles becoming more and more common.

Defined by the Seattle Midlife Women’s Health Study
Conventional approaches

Treatment of abnormal bleeding in perimenopause

• Progestational therapy
• Oral contraceptives
• Gonadotropin agonists with add-back therapy
• Nonsteroidal anti-inflammatory drugs
• Progesterone- or progestin-releasing intrauterine devices
• Endometrial ablation
Recommended botanical medicines in

Treatment of abnormal bleeding in perimenopause

• Arnica (*Arnica montana*)

• Beth root (*Trillium erectum*)

• Burning bush (*Dictamnus albus*)

• Ergot (*Claviceps purpurea*)

• Great burnet (*Sanguisorba officinalis*)

• Horsetail (*Equisetum arvense*)

• Lavant cotton (*Gossypium herbaceum*)

• Maidehair (*Andiantum capillus-veneris*)

• Nerve root (*Cypripedum calcelocus*)

• Scotch broom (*Cytisus scoparius*)

• Shepherd’s purse (*Capsella bursa-pastoris*)

• Sweet sumach (*Rhus aromatica*)
Theory

Vasomotor symptoms: hot flashes and sweats

Loss of estrogen leads to a failure of thermoregulatory processes with the set-point for temperature regulation readjusted to kick in within the normothermic range, rather than in hyperthermic state.
Conventional approaches

Treatment of vasomotor symptoms

- Estrogen
- Progestins (megestrol, norethindrone acetate, medroxy-progesterone acetate)
- Selective serotonin reuptake inhibitors (SSRIs)
Alternatives for vasomotor symptoms (1)

- Soy
- Black cohosh
- Dong quai
- Evening primrose
- Ginseng
- Soy- and red clover-based isoflavone supplement
- Topical progesterone
The use of soy has not been specifically addressed in perimenopausal women, but in menopausal women.

The studies are difficult to compare because of different amounts of soy protein in differing food stuffs with different amounts of the active component- the isoflavones.

Studies have been of very short duration, less than 3 month.
## Soy (2)

<table>
<thead>
<tr>
<th>Study type</th>
<th>Sample size</th>
<th>Treatment group</th>
<th>Control group</th>
<th>Duration</th>
<th>Result (Hot flash)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td></td>
<td>20g soy protein with 34 mg isoflavones</td>
<td>20g carbohydrate complex</td>
<td>1.5 month</td>
<td>Decreased in severity but not in frequency in the treatment group</td>
</tr>
<tr>
<td>Randomized control</td>
<td>100 women</td>
<td>60g soy protein with 76 mg isoflavones</td>
<td>casein</td>
<td></td>
<td>Decreased by 45% in treatment are, compared with only a 30% decrease in the control group</td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td>Soy flour supplement</td>
<td>Wheat flour</td>
<td>3 month</td>
<td>40% reduction in treatment group vs 25% in control group</td>
</tr>
<tr>
<td>Randomized, double-blind, placebo control</td>
<td>24 women</td>
<td>60g soy protein with 134.4 mg isoflavones</td>
<td>Isoflavone-poor version</td>
<td>3 months</td>
<td>No observed difference</td>
</tr>
</tbody>
</table>
Cognition, mood, affect, depression, anxiety, and sleep

- Mood disorders associated with perimenopause clearly overlap with PMS and premenstrual dysphoric disorder (PMDD).
- Ovarin steroids directly or indirectly influence neurotransmitters.
- The abnormal hyperreactivity of some women to changes in normal endogenous levels of sex steroids may be tied to the serotonergic system.
- PMS has been treated successfully with SSRIs
- Adrenergic, opioid, and r-aminobutyric acid (GABA) systems have also been suggested to play a role in hormonally sensitive subjects.
Alternatives for mood and affective complaints

- Ginkgo
- Kava (Piper methysticum)
- St. John’s wort (Hypericum perforatum)
- Valerian
The editors of the prestigious *New England Journal of Medicine* asserted:

There cannot be two kinds of medicine – conventional and alternative. There is only medicine that has been adequately tested and medicine that has not, medicine that works and medicine that may or may not work. Once a treatment has been tested rigorously, it no longer matters whether it was considered alternative at the outset.
Phytoestrogens: definition, classes and sources

• Definition: phytoestrogen are naturally occurring compounds, found in plants, that are structurally and functionally related to 17β-estradiol or that produce estrogenic effects.

• Classes: lignans, isoflavones, coumestans and resorcylic acid lactones.

• Sources: plants including cereals, legumes (soybeans, red clover…) and grasses.
Phytoestrogens in the management of the menopause

Epidemological studies suggest that consumption of a phytoestrogen-rich diet may ameliorate estrogen-deficiency symptoms in postmenopausal women, and may be protective against breast, endometrial and bowel cancers, osteoporosis and cardiovascular disease.

(Rees and Purdie, 1999)