Evidence-based answers from the Family Physicians Inquiries Network

Evidence summary

**Chasteberry Tree and Calcium**

A double-blind RCT comparing chasteberry tree with placebo in 170 patients found a decrease in self-reported PMS symptom scores and an increase in response rate (defined as a 50% reduction in symptoms)—52% vs 24%—in the intervention group (number needed to treat [NNT]=3.5). Patients taking chasteberry tree had 1 occurrence of multiple abscesses and 1 of urticaria.

A prospective, open-label study of chasteberry tree for PMS symptoms in 43 patients found a 42% decrease in self-assessed PMS symptom scores, with the greatest improvement in pain, behavior changes, negative feelings, and fluid retention. No serious adverse events occurred.

A third study comparing chasteberry tree with fluoxetine in 19 patients found a decrease in premenstrual symptom scores for both fluoxetine (13 of 19 patients) and chasteberry tree (11 of 19 patients). No statistically significant differences were noted between the 2 groups. Chasteberry tree was well tolerated; most adverse effects occurred in patients receiving fluoxetine. The most frequent adverse effects with chasteberry tree were nausea in 5 patients and headache in 4.

**Pyridoxine**

A meta-analysis of pyridoxine in doses from 50 to 600 mg per day for PMS included 9 RCTs. Relative to placebo, pyridoxine improved PMS symptom scores (odds ratio=2.32, 95% confidence interval [CI]=1.49-3.61) and was associated with a significant decrease in symptoms (odds ratio=2.37, 95% CI=1.48-3.81). The most common adverse effects were headache, rhinitis, and nonspecific pain. However, high doses of pyridoxine can cause neuropathy.

**Calcium**

Two RCTs (33 and 466 patients) comparing 1000 and 1200 mg of calcium with placebo found a significant decrease in PMS symptoms after 3 treatment cycles. Calcium improved negative affect, water retention, food cravings, and pain. In the first study, 73% of patients preferred taking calcium, compared with 15% who preferred placebo.

The second study found that, by the third treatment cycle, patients taking calcium had an overall 48% reduction in total symptom scores, compared with a 30% reduction in the control group.

**Magnesium**

Insufficient evidence exists to recommend magnesium.

**St. John’s Wort and Evening Primrose Oil**

St. John’s wort and evening primrose oil aren’t effective for managing PMS (SOR: B). However, limited quality patient-oriented evidence suggests some benefit. A Swedish study of 84 patients found a statistically significant decrease in PMS symptoms with St. John’s wort and evening primrose oil compared with placebo (78% vs 45%).

**Black Cohosh and Vitamin E**

No evidence was found to support black cohosh or vitamin E.

**Symptoms decrease significantly after 3 calcium treatment cycles**

Watch out for neuropathy with high doses of pyridoxine.
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2. Berger D, Schaffner W, Schrader E, et al. Efficacy of retention symptoms by 2 points on an 80-point Th e second study reported a decrease in fluid also report minimal eff ects with vita- tions converted to a randomized, blinded design (N=10), no difference was found compared with placebo. St. John’s wort, evening primrose oil don’t work One randomized, double-blind controlled trial (N=125) of 600 mg St. John’s wort vs placebo over 2 cycles of treatment found no significant changes in symptom score from baseline. Two double-blind crossover studies of 27 and 38 patients found that evening primrose oil had no effect on PMS symptoms. Recommendations Th e Premenstrual Syndrome Guidelines of the American College of Obstetricians and Gynecologists (ACOG) state that calcium and magnesium have been shown to be eff ective in small trials and must be validated in larger trials before a strong evidence-based recommendation can be made. ACOG’s guidelines also report minimal effectiveness with vitamin B6 and vitamin E. References

3. Atmaca M, Kumru S, Tuzcan E. Fluoxetine versus Placebo over 2 cycles of treatment found no signifi cant changes in symptom score.13 Two double-blind crossover studies of 27 and 38 patients found that evening primrose oil had no eff ect on PMS symptoms.14,15

Evidence for magnesium is sparse
Two RCTs comparing magnesium with placebo had low precision because of small numbers and short treatment duration.10,11 Th e eff ect of 2 cycles of treatment with saffron (Crocus sativus L), 30 mg twice daily, on PMS symptoms in 50 patients. Nineteen patients in the saffron group showed a response, defi ned as 50% reduction in symptom severity, compared with 2 patients in the placebo group (NNT=2). Th e study found no statistical signifi cant diff erence in frequency of adverse effects.3 Saffron shows promise in small study