

CASE STUDY #1152: Assessing the Effects of Targeted Nutritional Support including a Combination Formula Featuring Isoflavones from Kudzu and Red Clover and Indole-3-Carbinol (I3C) in a Perimenopausal Patient

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PURPOSE

The purpose of this study was to show how nutritional support focused on improving hormone balance—including a combination formula featuring isoflavones from kudzu and red clover and an I3C/rosemary extract blend—along with a soy-based medical food for altered body composition and fish oil concentrate, may be useful in patients experiencing perimenopausal symptoms.

PATIENT'S PRESENTATION AND HISTORY

A 49-year-old female presented with chief complaints of daytime hot flushes (3 per day), night sweats, and insomnia. The night sweats had started about 1½ years earlier, concurrent with irregular periods, and had stopped after 6 months. Six months before presentation, the night sweats had resumed (2 to 4 per night), along with the hot flushes (3 per day) and sleeping problems. Her periods had continued to be irregular. Other symptoms included swollen PIP (proximal interphalangeal) joints, achiness in her hips upon waking, decreased concentration, increased vaginal dryness, decreased libido, dry skin, and foot cramps at night.

The patient's family history included breast cancer on the maternal side, her father died of heart failure at age 53, and her mother had a stroke at age 76.

Initial Clinical Information

- Height was 64", weight was 141 lb, and blood pressure was 100/66
- Physical exam: dry skin and scalp; slightly swollen PIP joints
- Laboratory results: slightly depressed red blood cells and hematocrit; progesterone, sex-hormone binding globulin, DHEA-S, and testosterone were within reference ranges; low estradiol; depressed 2-hydroxyestrone (2-OH) to 16 α -hydroxyestrone (16 α -OH) ratio and elevated 16 α -OH; NTx* within reference range
- Supplements: calcium/magnesium, hesperidin

ASSESSMENT AND PLAN

The initial assessment indicated symptomatic perimenopause with hot flushes, as well as some PIP joint tenderness. The patient was instructed to begin:

- Combination formula providing isoflavones (from kudzu and red clover), turmeric, rosemary, and vitamins A, D, E, K, B₆, B₁₂, and folate for support of healthy estrogen metabolism and detoxification, 3 tablets before bedtime
- 2 g fish oil concentrate (EPA:DHA, 600:400 mg), twice daily

- I3C with rosemary leaf extract, 1 capsule twice daily with food
- A medical food for altered body composition, 1 serving twice daily
- Daily log of hot flush/night sweat symptoms

RESULTS

4 Weeks after Starting the Plan

After 4 weeks, the patient reported no changes in perimenopausal symptoms or PIP joint pain. Laboratory tests indicated elevated sedimentation rate, suggesting significant inflammation. She was instructed to add a concentrated herbal supplement providing boswellia, turmeric, ginger, and cayenne for relief of minor joint and muscle pain, 2 tablets three times daily.

8 and 13 Weeks after Starting the Plan

At the 8-week visit, the patient noted a decrease in hot flushes/night sweats and improved sleep. The PIP joint swelling had improved after only 1 week on the herbal supplement and she was now able to slip her rings on and off easily. She was instructed to continue the current protocol, but decrease the dosage of the herbal supplement to use only as needed for pain.

After 13 weeks, the patient's symptom log showed a decline in daytime hot flushes and her night sweats were reduced by 50%. She reported further improvements in her sleep and less PIP swelling. Laboratory results indicated normalized 16 α -OH and 2-OH: 16 α -OH, and her blood sedimentation rate had also normalized. The patient was advised to continue the same protocol, but to decrease the fish oil supplement to 2 g daily for maintenance.

17 Weeks after Starting the Plan

The patient was discharged and referred to her primary physician after 17 weeks on the program. Her night sweats had completely abated, daytime hot flushes were very mild, and she was managing the PIP swelling with the herbal supplement. The patient was advised to remain on the prescribed maintenance program long term.

49% Increase in Protective 2-OH

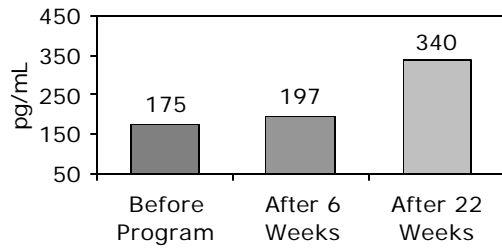


Figure 1. In a 22-week period, the patient's 2-OH estrogen increased from 175 pg/mL to 340 pg/mL (reference range 59-363 pg/mL). This result suggests that the protocol triggered a shift toward greater 2-OH production. The 2-OH metabolite confers weak estrogenic activity and is generally termed the "good" estrogen (as compared to 16 α -OH).

17% Decrease in 16 α -OH

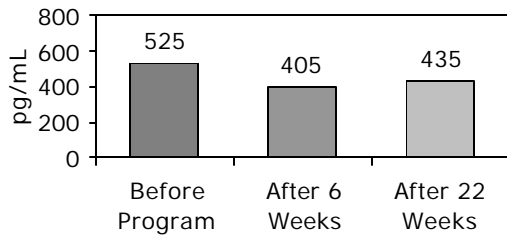


Figure 2. In 22 weeks, the patient's 16 α -OH decreased from 525 pg/mL to 435 pg/mL (reference range: 236-522 pg/mL). This result suggests that the protocol triggered a healthy shift in estrogen metabolites toward lower 16 α -OH production.

58% Increase in the Ratio of 2-OH:16 α -OH

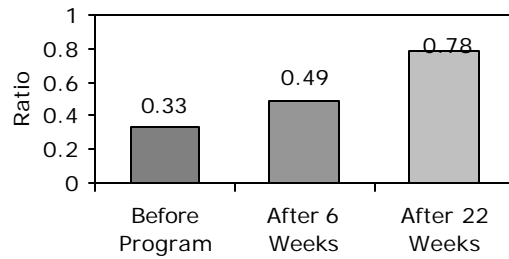


Figure 3. In 22 weeks, the patient's ratio of 2-OH:16 α -OH increased from 0.33 to 0.78. This result supports the previous data indicating a positive, healthy shift in estrogen metabolism.

SUMMARY

This case study suggests that targeted nutritional support to promote healthy estrogen metabolism and detoxification—including isoflavones (from kudzu and red clover) and an I3C/rosemary extract blend—along with a soy-based medical food for altered body composition and fish oil concentrate, may be useful in relieving perimenopausal symptoms. Additionally, concurrent supplementation with natural support of boswellia, turmeric, ginger, and cayenne was shown to help reduce inflammation and relieve minor pain in a short period of time.

NOTE

The information provided in this case study describes the results of one patient under the care of a licensed healthcare practitioner and may not be a typical response.

Financial support for this study was provided by Metagenics, Inc. This study was conducted at the Functional Medicine Research Center (FMRC), the clinical research arm of Metagenics, Inc. Dan Lukazcer, ND, is the Director of Clinical Research at the FMRC.

*NTx is a sensitive and specific assay used to indicate subtle changes in levels of bone resorption. It is an assay that provides a quantitative measure of cross-linked N-Telopeptides of type I collagen (NTx) in serum and urine.

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 MET1152 06/05