

Case #1274: A Case Study Evaluating the Effects of an Inflammatory-Modulating Medical Food and a Nutritional Supplement Containing a Proprietary Blend of RIAA, Vitamin D₃, Selenium, and Zinc in a Patient with Rheumatoid Arthritis

Robert H. Lerman, MD

Functional Medicine Research CenterSM, Gig Harbor, WA 98332

PURPOSE

This study was designed to assess the effectiveness of an anti-inflammatory medical food, a targeted nutritional supplement (featuring a proprietary blend of reduced iso-alpha acids, vitamin D₃, selenium, and zinc), and a complementary diet in a patient with RA.

PATIENT'S PRESENTATION AND HISTORY

A 52-year-old female presented in September 2005 with a previous diagnosis of RA. At age 25, her hands became sore and weak, and her knees and feet started bothering her. She had Morton's neuroma removed without benefit. She then tested positive for rheumatoid factor and was treated with gold shots with a very good response. When she had a baby at age 27, the gold shots were discontinued and her pain and swelling promptly returned. Treatment with penicillamine was beneficial for a year or two, and upon recurrence of symptoms, she was switched to plaquenil and prednisone. At age 35, she was switched to methotrexate and did very well for 15+ years, and then she began to note soreness again. At this time she was switched to leflunomide with benefit; however, she developed hair loss and her fingernails were "like paper" and painfully short. About 3 years before presentation, she was switched to etanercept, and although she did better on this medication, her foot, hand, and wrist pain persisted. She was still getting tired and her hands and feet would swell off and on. About 5-6 weeks prior to presentation, she had surgery on her left foot for removal of pins that were placed 2-3 years earlier to stabilize her ankle.

Other current medical conditions and complaints included: dry eyes, hemorrhoids, hypothyroidism (controlled), mild mitral valve prolapse, and breast fibrocystic disease.

Her past medical conditions included pneumonia (1994), anemia (1987), herniated disc (1979), polyps (2003), and endometriosis and hysterectomy (both 1987). In addition, she had a total of 9 foot surgeries (both feet) and a tendon transfer in right hand and thumb.

The patient's family history included anemia, Alzheimer's disease and hypertension (mother), and RA in sister, cousin, and great aunt.

Patient's Objective Information

- Ht: 66.25"; Wt: 120 lb; BP: 106/60
- Laboratory tests revealed depressed red blood cell count, hemoglobin and hematocrit; elevated rheumatoid factor (RF) at 234 (reference range 0-15 IU/mL) and sedimentation rate at 57 (reference range: 0-30 mm/hr); positive antigliadin IgG antibody; and low normal 25-hydroxy vitamin D
- Physical examination: essentially unremarkable except for proximal interphalangeal (PIP) joint nodularity/swelling bilaterally, maximal on middle fingers; loss of thenar muscles; thumbs with rheumatoid deformity; loss of dorsiflexion on right wrist; and several surgical scars on both feet and right hand
- Prescription medications and supplements: etanercept (25 mg 2 times/week), levothyroxine (100 mcg daily), biotin and calcium supplement (132 mg – 5,000 mcg daily); calcium carbonate with multivitamin (1,000 mg daily), buffered vitamin C with bioflavonoids (1,000 mg daily), and fish oil concentrate (1,000 mg daily)

PLAN AND RESULTS

Assessment: RA with high rheumatoid factor, fatigue (secondary to RA), hypothyroidism, gluten sensitivity, and low normal vitamin D.

Plan: The patient was instructed to begin an inflammatory-modulating medical food in powdered beverage form, working up to 2 scoops twice daily, and a supplement containing 200 mg of reduced iso-alpha acids derived from hops (RIAA), 1 tablet twice daily.

2 Week Results

After 2 weeks, the patient reported that her joint pain had not lessened, and she noted no change in fatigue symptoms. Additionally, she had been having mild hot flashes during the day and night. The patient was instructed to:

- Continue the inflammatory-modulating medical food
- Switch from the RIAA supplement to one containing a combination of RIAA, vitamin D₃, zinc, and selenium, 1 tablet twice daily with medical food
- Switch from her fish oil concentrate to one containing a combination of EPA (300 mg), DHA (200 mg), and vitamin E (10 IU), 2 softgels three times daily
- Begin a combination isoflavone supplement (containing vitamins, folate, kudzu and clover isoflavones, turmeric, rosemary, and resveratrol), 3 tablets daily
- Begin a gluten-free diet

4 Week Results

After 4 weeks, the patient was feeling better with less fatigue, but joint swelling had not improved. Her hot flashes had definitely lessened. She was constipated and a stool analysis indicated a lack of intestinal bifidobacteria. A Women's Hormonal Health Assessment indicated depressed DHEA-S, 2-hydroxyestrone, and 2:16 (OH) estrogen ratio, as well as elevated estriol. She was advised to:

- Continue with the inflammatory-modulating medical food, combination RIAA supplement, and EPA/DHA supplement, and to take the 3 tablets of isoflavone supplement with dinner
- Start an indole-3-carbinol (I3C) supplement, 1 tablet twice daily
- Start a liquid DHEA spray, 1 pump twice daily
- Add 1 tsp. flaxseed to her medical food beverage for constipation

6 Week Results

After 6 weeks, the patient reported a substantial improvement in joint pain. The pain was gone in her knees, and she noted only mild discomfort in hands when using them for long periods of time (i.e., working in the yard). She also noted increased soreness in her hands after eating wheat. Her fatigue symptoms were better, although not totally gone, and she had increased energy. Hot flashes were mild and no longer woke her up. Her sedimentation rate had normalized, but RF remained very elevated. She was advised to:

- Continue the medical food, combination RIAA supplement, and EPA/DHA supplement at current dosages
- Switch time of dosage of the combination isoflavone supplement to lunch (3 tablets)

Figure 1. After 6 weeks, the patient's MSQ* score decreased from 14 to 5. This result suggests a substantial improvement in general physical symptoms.

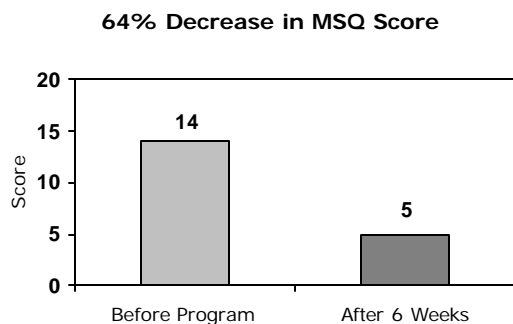
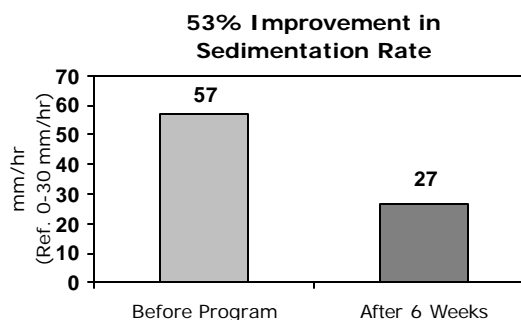


Figure 2. The patient's sedimentation rate normalized within 6 weeks, suggesting a noteworthy reduction in inflammation.



SUMMARY

This case study suggests that a protocol combining an inflammatory-modulating medical food and a nutritional supplement—featuring a combination of RIAA, vitamin D₃, selenium, and zinc—along with a prescribed dietary plan may be beneficial as nutritional support for patients with RA and other inflammation-related symptoms.

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.

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*The Medical Symptoms Questionnaire (MSQ) is a clinical tool for the evaluation of general physical symptoms. Total scores above 75 are generally associated with substantial symptomatology and disability; scores below 30 generally indicate few or low-intensity symptoms.

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