

Case #1273: 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

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PURPOSE

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

PATIENT'S PRESENTATION AND HISTORY

A 51-year-old female presented in July 2005 with a previous diagnosis of RA. She complained of swollen knees, muscle aching, and intermittent nausea and fatigue. She also noted that her hands and bottom of her feet would get hot. Her symptoms of severe burning in leg muscles that lasted all day long started a year earlier at a time of high job-related stress. She started to feel progressively more tired, and later that month she developed swelling of the ankles, knees, elbows, and hands. Concurrently, she began to note nausea after exercise. Her GP placed her on prednisone with symptom resolution, but within 48 hours after discontinuation the swelling resumed full force. She couldn't get out of bed without help. No abnormalities were detected through laboratory workup, but diagnosis of RA was made soon after by a rheumatologist. She was placed on methotrexate and prednisone with improvement in joint symptoms but marked tiredness. Two months later she was switched to etanercept, and methotrexate and prednisone were discontinued. Upon worsening of symptoms later on, she was first placed on prednisone; then methotrexate was resumed as prednisone was weaned off. She had stopped methotrexate on her own before presentation.

Other current conditions/complaints included: recent weight gain, loss of small hand dexterity, anemia as a consequence of heavy menstrual bleeding for many years (controlled with iron), and vitiligo on her arms.

The patient's past medical conditions included severe bronchitis 2 years earlier, lasting 6 months. She had plates and rods in right arm placed after MVA.

Her family history was not significant for RA or other inflammatory diseases. She had 2 paternal cousins with multiple sclerosis. Her father had died at age 71 of emphysema and tuberculosis, and her mother died at age 71 with leukemia.

Patient's Objective Information

- Ht: 64"; Wt: 199.5 lb; BP: 112/69
- Laboratory tests revealed elevated hs-CRP at 2.2 mg/L and low normal 25-hydroxy vitamin D at 33 (reference range: 16-91 ng/mL)

- Physical examination: essentially unremarkable except for a few skin tags
- Prescription/non-prescription medications and supplements: etanercept (25 mg twice/week), iron supplement (2 tablets daily), naproxen (200 mg 1-2 times/week for pain after intense activity), calcium (1,500 mg daily), vitamin and mineral "super food" powdered supplement (2 Tbsp. daily), herbal female formula (before menses), and EPA/DHA fish oil supplement (300 mg EPA + 200 mg DHA, 2 softgels daily)

PLAN AND RESULTS

Assessment: RA with negative rheumatoid factor, obesity, and iron deficiency.

Plan: The patient was instructed to begin an inflammatory-modulating medical food in powdered beverage form, including reduced iso-alpha acids from hops (RIAA) and vitamin D₃, working up to 2 scoops twice daily.

5 and 7 Week Results

After 5 weeks, the patient reported that she was feeling better and she noted more energy. She was walking again without problems and was able to go up and down stairs more easily. She had been able to paint for several days, an activity that she could not have undertaken in the recent past. She was started on a 21-day elimination diet followed by careful food reintroduction.

After 7 weeks, the patient rated her joint pain at a level of 2-3 (scale of 1-10), down from 6-7 before beginning the protocol. She was able to go up and down the stairs facing forward, while previously she had to go down sideways. Elbows, knees, and hands only bothered her occasionally; her mind was clear and she felt well. Patient was asked to take:

- Inflammatory-modulating medical food in powdered beverage form, 2 scoops twice daily
- Nutritional supplement containing 200 mg RIAA, 1 tablet twice daily
- Nutritional supplement containing 2,000 IU vitamin D₃ with soy isoflavones, 1 tablet daily

9 and 13 Week Results

After 9 weeks of compliance with the program, the patient reported feeling much improvement in her arthritic pain symptoms, noting that "I feel so good, I forgot to take my medicine [etanercept]." She had missed a couple of doses and did not have pain. The joint pain in her elbows and knees occurred only a few hours after heavy exercise and weight training, and would be resolved by the next morning. She noted no nausea or fatigue, and her muscle aches

had also been resolved. Her feet had not felt hot in 2 weeks. The patient had been on the elimination diet for 4 weeks and reported 100% compliance. She was instructed to:

- Discontinue the RIAA and vitamin D₃/isoflavone supplements
- Begin a supplement containing RIAA, vitamin D₃, zinc, and selenium, 1 tablet twice daily

At the 13-week visit, the improvement had been sustained. The patient was much more active, felt very energetic, and was no longer tired. She noted that her only limitation was heavy lifting, and she reported that she had not taken naproxen in the previous 5-6 weeks. She was instructed to:

- Increase the dose of the RIAA combination supplement to 2 tablets twice daily
- Continue on the current medical food, 2 scoops twice daily
- Begin a fish oil supplement containing EPA (300 mg), DHA (200 mg), and vitamin E (10 IU), 2 softgels three times daily

Figure 1. The patient's MSQ* score decreased from 21 to 8 in 13 weeks. This result suggests a substantial improvement in general physical symptoms.

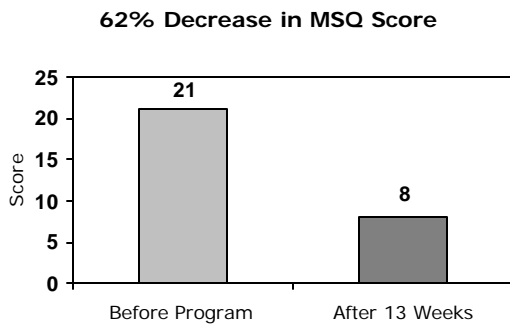


Figure 2. From the 3-week visit to the 13-week visit, the patient's Medical Outcomes Survey[§] PCS score increased, suggesting improvement in physical functioning.

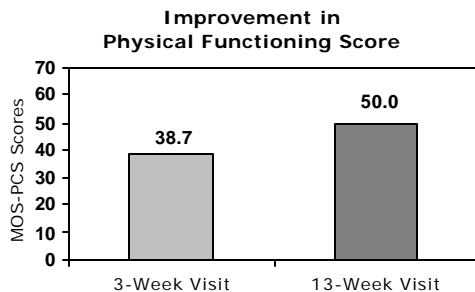
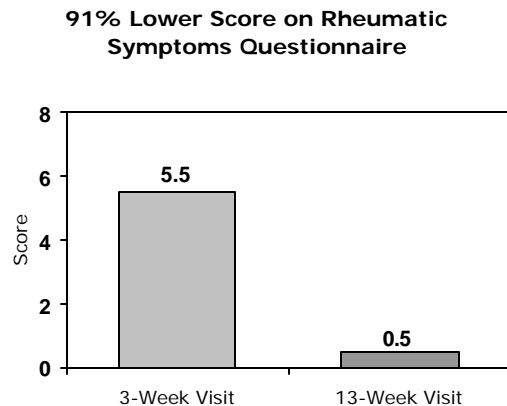


Figure 3. In 10 weeks after the 3-week visit, the patient's score on the AIMS2-A[†] questionnaire for the symptoms component decreased from 5.5 to 0.5 (reference range: 1-10). This result indicates a significant improvement in rheumatic symptoms.



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 rheumatoid arthritis 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.

Financial support for this study was provided by Metagenics, Inc. This study was conducted at the Functional Medicine Research CenterSM (FMRC), the clinical research arm of Metagenics, Inc.

*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.

§The Medical Outcomes Survey SF-36 is a well-validated general quality-of-life questionnaire that summarizes health outcome in reliable, reproducible scores. On a scale of 0-100, 50 is the mean for the Physical Component Summary (PCS) in the U.S. Scores of 50 or higher are associated with healthier individuals, whereas scores lower than 50 indicate compromised functioning.

†The AIMS2-Abridged questionnaire is a clinical tool for the evaluation of health status and outcomes of individuals with rheumatic diseases. A low score value indicates a high health status; while a high score value indicates poor health.

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