

Case #1269: 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 Erythromelalgia and Raynaud's Phenomenon

Clinician: J. Kornberg, MD

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 erythromelalgia and Raynaud's phenomenon.

PATIENT'S PRESENTATION AND HISTORY

A 44-year-old Caucasian female presented in 8/05 with a history of erythromelalgia with hot painful feet (developed 6-7 years prior) and Raynaud's phenomenon with cold and painful fingers (developed 10 years prior after the birth of her second child). She was currently taking gabapentin with some relief in symptoms. Her erythromelalgia started as an occasional symptom but slowly increased in frequency to the current daily occurrence with discomfort moving up into her legs. She was diagnosed 3 years earlier (mechanism is opposite to that of the Raynaud's phenomenon in that the blood vessels dilate causing pain, heat, and erythema), and was treated with citalopram with some symptom relief.

The patient's medical history included the following current conditions: increased fatigue in prior 6 months; poor sleep with mild sleep apnea and restless leg syndrome (60% controlled with pramipexole); increasing abdominal bloating, gas, and indigestion over the prior 6 months; asthma after a bad bronchitis (controlled largely with albuterol); migraine headaches since early teens (80% controlled with gabapentin); rotator cuff injury (80% improved by surgery with residual discomfort).

Her past medical conditions included mycoplasma pneumonia (treated with multiple doses of antibiotics), anemia, bronchitis, and mononucleosis. She also had a rash over most of her body since age 18 that was resolved when she discovered an allergy to aspartame and nitrates. The patient's surgical procedures included cystocele repair, rotator cuff repair, tubal ligation, and a partial hysterectomy. Her family history included allergies, hypertension, and bone cancer (father).

Patient's Objective Information:

- Ht: 66"; Wt: 166 lb; BP: 111/91
- Laboratory tests revealed elevated lactulose recovery and lactose/mannitol ratio, elevated ALT, and low-normal 25-hydroxy vitamin D
- *Physical examination:* Essentially unremarkable except for erythema extended up to the knees;

coolness to ankles on both feet, very tender to touch; erythema of the fingers of both hands, warm to touch (*Note: When patient was not having symptoms, her extremities had findings opposite to her symptoms.*)

- *Prescriptive medications and supplements:* citalopram (for depression—60 mg twice daily), gabapentin (900 mg twice daily), pramipexole (0.5 mg every evening), ibuprofen (400 to 600 mg/day as needed), and a multivitamin and mineral effervescent powder drink for energy.

ASSESSMENT AND PLAN

Assessment: Erythromelalgia, Raynaud's phenomenon, dysbiosis, fatigue (probably from sleep apnea), restless leg syndrome, asthma, and migraine headaches (possibly exacerbated by food allergies).

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

2 and 5 Week Results

After 2 weeks, the patient reported a 50% improvement of symptoms and less fatigue. The pain in her shoulder had decreased. She was instructed to discontinue the prescribed medical food with RIAA and vitamin D₃ and to begin:

- 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
- Supplement containing a combination of EPA (300 mg) and DHA (400 mg) essential fatty acids and vitamin E (10 IU), 2 softgels twice daily
- Supplement with a combination of vitamin B₁₂, folic acid, and intrinsic factor, 1 tablet daily
- Elimination diet

After 5 weeks, the patient was very excited to report a 100% reduction in hand pain and noted that she was able to open up jars and cans. She also noted less swelling and redness in her feet. She reported no migraines and very few headaches, higher energy levels, improved sleep, and resolved intestinal gas. Laboratory results indicated positive endomysial antibodies, positive antigliadin antibodies, positive transglutaminase antibodies, elevated Eosinophil Protein X and calprotectin, and no intestinal growth of beneficial *Lactobacillus* and *Bifidobacterium*. She was instructed to continue on the prescribed nutraceuticals, except for:

- Switch from RIAA 200 mg to a supplement containing a combination of RIAA (225 mg),

vitamin D₃ (500 IU), zinc (5 mg), and selenium (50 mcg), 1 tablet twice daily

- Add a probiotic supplement featuring a blend of *Bifidobacterium lactis* strains (targeting the large intestine) and a probiotic supplement featuring a blend of *Lactobacillus* strains (targeting the small intestine), 1 capsule twice daily each (upon rising and at dinner)
- Add 1 teaspoon of a powdered nutritional supplement—containing a combination glutamine (3,500 mg), deglycyrrhized licorice root (DGL) (500 mg), and aloe extract (50 mg)—to her medical food beverages
- Start gluten-free diet

8 and 12 Week Results

After 8 weeks, the patient felt she no longer needed to take citalopram for depression or pramipexole for sleeping, so she discontinued both. She had decreased the gabapentin dose from 9 to 3 tablets per day with no increase in pain. The patient was having occasional and tolerable Raynaud's symptoms and stated that she felt "like I am 20 years younger." Physical exam revealed fairly normal appearance in hands with only slight erythema, and feet slightly cool to the touch but without erythema. The patient was instructed to continue on the prescribed program.

After 12 weeks, the patient happily reported that she could actually stand on her feet without any pain at all, something that she had not been able to do in years. She had stopped all medications and had no pain, although she was still having some Raynaud's symptoms. Laboratory tests indicated normalized homocysteine, improved intestinal permeability, and improved gut immunology. Fecal mycology was positive for *Candida albicans*. She was instructed to:

- Continue on medical food, EPA/DHA, probiotic, and glutamine/DGL/aloe supplements
- Increase RIAA/D₃/Zn/Se to 1 tablet three times daily
- Restart vitamin D₃/isoflavones supplement at 1 tablet in the morning
- Begin an herbal formula containing berberine for intestinal dysbiosis, 2 tablets twice daily

Figure 1. After 12 weeks, the patient's MSQ* score decreased from 24 to 5. This result suggests substantial improvement in physical symptoms.

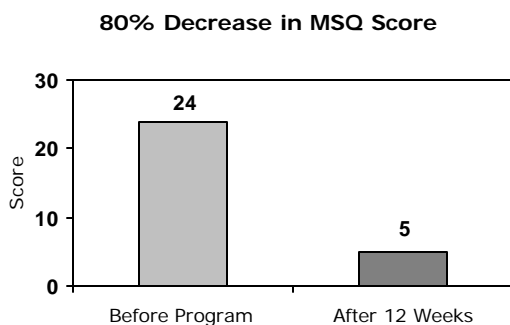
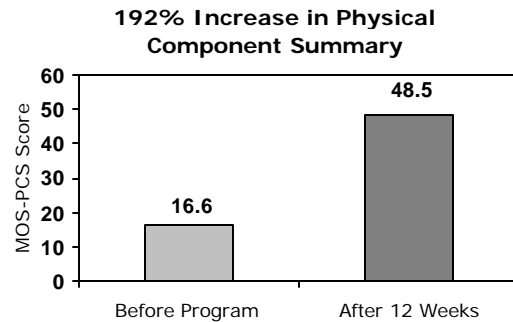


Figure 2. The patient's MOS-PCSs score increased from 16.6 to 48.5 in 12 weeks, suggesting a substantial improvement in pain symptoms.



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 for improvement of Raynaud's phenomenon and erythromelalgia.

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.

§The MOS 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 US. Higher scores are associated with healthier individuals.

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