

CASE STUDY

UltraClear PLUS[®]

NUTRITIONAL SUPPORT FOR DETOXIFICATION

NUTRITIONAL SUPPORT USING ULTRACLEAR PLUS[®] IN A PATIENT WITH FIBROMYALGIA (FM) AND UNDIFFERENTIATED CONNECTIVE TISSUE DISEASE

Purpose

To study the effect of nutritional support with UltraClear PLUS medical food for detoxification in the treatment of FM.

Patient's Presentation and History

A 47-year-old white female with previously diagnosed FM and undifferentiated connective tissue disease* presented with generalized muscle pain, low energy levels, and lack of concentration. Although her FM had been diagnosed only 3 years earlier, she reported that she had been symptomatic for the previous 8 years. Her family history included food allergies, asthma, and autoimmune and motor neuron diseases. She was taking a multivitamin/mineral supplement, magnesium malate supplement, and DHEA, but no prescription medications at the time of presentation.

Patient's Objective Information

- Elevated MSQ[†] score as well as a low SF-36 PCS^{††} score indicated significant physical symptoms and compromised functioning
- Initial laboratory assessment showed:
 - Low caffeine clearance, suggesting under-functioning of Phase I detoxification
 - Low Phase II glycine conjugation
 - Low-normal Phase II sulfation and glucuronidation and glutathione conjugation was high. (Since glutathione is the overflow pathway for sulfation and glucuronidation, these findings suggested the sulfation and glucuronidation pathways may be overwhelmed or not functioning sufficiently.)
 - Low plasma sulfate and high-normal urine lipid peroxides, further suggesting impaired detoxification

Plan

The patient was placed on:

- UltraClear PLUS at 2 scoops bid for nutritional support *with no other changes in diet.*

2 Week Results

After 2 weeks, the patient reported feeling much better. Her MSQ score had decreased to 48 from 132 and PCS score showed an increase, indicating improvement in physical symptoms and functioning including generalized muscle pain, low energy levels, and lack of concentration (Table 1). She reported some constipation and was placed on a fiber supplement.

6 Week Results

After 6 weeks, the patient reported she was very pleased and said: "I have a lot of energy that I haven't had in a long time." She also noted improved cognition and significantly less achiness. Her MSQ and PCS scores were greatly improved (Table 1), and her laboratory results also showed significant improvement in both Phase I and Phase II detoxification parameters (Table 2).

Conclusion

FM is a multifactorial condition and exacerbation of symptoms can involve environmental triggers. The ability to manage environmental factors through healthy detoxification can help ameliorate some symptoms associated with FM, as demonstrated in this case. UltraClear PLUS may also promote healthy Phase I and Phase II detoxification, as well as decrease oxidative stress parameters.

RESULTS

UltraClear PLUS[®]

NUTRITIONAL SUPPORT FOR DETOXIFICATION

Table 1

Improvements in MSQ and PCS scores relate to reduced physical symptomatology and improved cognition after 2 and 6 weeks on UltraClear PLUS.

	Reference Range	Before UltraClear PLUS	2 Weeks After Starting UltraClear PLUS	6 Weeks After Starting UltraClear PLUS
Medical Symptoms Questionnaire (MSQ)	<30 = few or low intensity symptoms	132	48	19
SF-36 Physical Component Summary Score (PCS)	50 or above = healthy function	26.6	33.1	43.2

Table 2

Increased Phase II glucuronidation, sulfation, and glycine conjugation along with balanced Phase I activities indicate improved detoxification after 2 and 6 weeks on UltraClear PLUS. The decrease in glutathione conjugation also supports the observation of improved glucuronidation and sulfation since it is an *overflow pathway* for those activities *and is high when those Phase II pathways are not functioning optimally*.

	Reference Range	Before UltraClear PLUS	2 Weeks After Starting UltraClear PLUS	6 Weeks After Starting UltraClear PLUS
PHASE I DETOXIFICATION				
Caffeine Clearance (mL/min/kg)	0.5-1.6	.03	1.6	0.9
PHASE II DETOXIFICATION				
Glycine Conjugation (% salicylic recovery)	30%-53%	25%	34%	73%
Sulfation (% acetaminophen sulfate recovery)	16%-36%	18%	25%	21%
Glucuronidation (% acetaminophen glucuronide recovery)	27%-56%	33%	36%	38%
Glutathione Conjugation (% acetaminophen mercapturate recovery)	5.6%-11.4%	13%	8.1%	4.9%

MET854 9/03

*Undifferentiated connective tissue disease (UCTD) is defined as a chronic inflammatory autoimmune disease involving the body's connective tissues. UCTD may be, or evolve into, lupus, scleroderma, polymyositis, vasculitis, rheumatoid arthritis, or Sjogren's syndrome.

†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 two reliable reproducible scores: the Physical Component Summary (PCS) and the Mental Component Summary (MCS). Scores of 50 or higher are associated with healthier individuals, whereas scores lower than 50 indicate compromised functioning.

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. UltraClear PLUS Medical Food is to be used under the supervision of a physician or other licensed healthcare practitioner.

Case Study: Nutritional Support Using UltraClear PLUS[®] in a Patient with Fibromyalgia (FM) and Undifferentiated Connective Tissue Disease. Metagenics, Inc; 005FM803.