Dynamic Chiropractic

NUTRITION / DETOXIFICATION

Managing Autoimmune Disease With Nutrition and Supplementation, Part 2

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Editor's note: Part 1 of this article appeared in the July 15 issue.

The exciting news for health care practitioners managing patients with autoimmune diseases is the revelation that certain natural agents act as natural bioregulators of TNF-alpha and nuclear factor kappa beta, which are hallmark features of autoimmune disease. Natural agents such as curcumin, quercetin, vitamin B_6, and catechins have shown an ability to down-regulate the effects of TNF-alpha and nuclear factor kappa beta in cases in which macrophages are overzealous. At the same time, these agents do not inhibit the release of these cytokines and transcription factors when they are required to help fight infection or induce apoptosis of emerging cancer cells.

These bioregulatory effects are indeed unique and noteworthy, as no drugs created to date can provide such bioregulatory influences on these important pathways. Curcumin is derived from the spice turmeric, quercetin is the most abundant flavonoid in nature, and catechins are found in green tea to an appreciable degree.

Thus, in addition to the natural anti-inflammatory supplement I recommend containing curcumin, white willow extract, ginger and boswellia (as described in part 1), I also recommend additional supplementation with quercetin (usually 1,000-2,000 mg per day), and suggest that the patient replace coffee with 3-5 cups of green tea (preferably decaffeinated green tea) daily.

A final consideration is that vitamin D supplementation has been shown to up-regulate the synthesis and release of interleukin-4 from various immune cells. Interleukin-4 has established anti-inflammatory effects.[37-49] As such, I recommend that autoimmune patients consider taking 5,000-10,000 IU of vitamin D daily, unless they suffer from sarcoidosis or hyperparathyroidism. Vitamin D also has other important bioregulation effects on the immune system, which may be helpful to patients with autoimmune disease. When taking supplements in this range, it is important to monitor blood vitamin D levels to ensure it does not exceed 250 nmol/L.

Immune Modulation

Bioregulation of the immune system has also been shown to be valuable in the management of autoimmune disease. Certain agents (i.e., thymus hormones), including various supplements, have been shown to down-regulate the secretion of TNF-alpha by activated macrophages and provide other immune-modulating effects on immune cells, which have produced favorable outcomes in patients with various autoimmune conditions. Bioregulation implies that these nutrients can boost immune activity when immune function is weak or compromised, and suppress overzealous behavior of immune function in patients with autoimmune conditions, reducing symptoms and episodes of exacerbation.

In some cases doctors inject patients with thymus peptide hormones. However, certain natural

supplements also provide significant immune modulation. My favorites include reishi mushroom extract and astragalus. Reishi mushroom extract has also been shown to inhibit the effects of nuclear factor kappa beta, as outlined above, making it a multimodal agent in the complementary management of autoimmune conditions.[50-61] In addition, probiotic and prebiotic supplementation (FOS and inulin) have also shown important immune bioregulator effects in patients with various autoimmune diseases, as well as in cases of eczema.[62-63]

Clinical Application

Autoimmune disease presents a daunting clinical challenge for medical and complementary health practitioners alike. As such, an aggressive proactive program is required, one that must address the main molecular features and biological targets of these diseases to help tame them; and provide patients with improved symptom control, quality of life and an ability to slow down or halt the progression of the disease. The main biological and molecular targets of importance to complementary health practitioners include specific eicosanoids, cytokines, transcription factors as well as immune modulation.

In regard to diet and supplementation there is sound scientific support for practitioners to provide patients with the following recommendations in the complementary management of autoimmune conditions, especially when joint involvement is a key feature of the disease:

- *Diet modifications:* Decrease intake of high-fat animal products (exception is fish), as well as trans fats, deep-fried and pan-fried foods. Using olive oil and other monounsaturated fat-rich oils in place of oils rich in linoleic acid is also beneficial to decrease synthesis of PG-2 eicosanoids.
- *Essential fatty acid supplementation:* 3-6 capsules per day of a supplement containing 400 mg each of fish, flaxseed and borage seed oil.
- *High-potency multivitamin/mineral* providing 1,000 mg vitamin C, 400 IU vitamin E, 100-200 mcg selenium, B-50 complex, 200-300 mg magnesium, and all vitamins and minerals from A to zinc.
- *Natural anti-inflammatory supplement* providing a combination of curcumin, white willow extract, ginger and boswellia, at meaningful dosages and proven standardized grades.
- *Immune and detoxification supplement* providing meaningful dosages of reishi mushroom extract, astragalus, indole-3 carbinol and milk thistle.
- *Glutathione support supplement:* The body cannot absorb glutathione from the intestinal tract to an appreciable degree. Supplements containing N-acetyl cysteine, alpha lipoic acid, L-glutamine and silymarin (from milk thistle) have been shown to increase cellular levels of glutathione, an important immune-modulating, antioxidant and detoxification tripeptide.
- *Quercetin:* 1,000-2,000 mg.
- *Vitamin D*: 5,000-10,000 IU; requires blood monitoring of vitamin D levels.
- *Additional antioxidants* if necessary (e.g., vitamin C: 2,000-5,000 mg; vitamin E: 1,000-1,600 IU; selenium: 200-500 mcg; beta-carotene: 25,000-50,000 IU).
- *Probiotic and/or prebiotic supplementation* (twice daily).

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