Flavonoid Mixture and Osteoarthritis of the Knee

A proprietary mixture of flavonoids (baicalin and catechin) known as flavocoxid (Limbrel) was tested against naproxen, a conventional non-steroidal anti-inflammatory drug for the management of moderate osteoarthritis (OA) of the knees. A 4-week, multicenter, double-blind, controlled pilot study was conducted in patients who had grade 2 to 3 OA of a knee. Subjects were randomly assigned to either flavocoxid 500 mg twice daily or naproxen 500 mg twice daily. One hundred three individuals were randomized to the trial. Two failed to complete the study, both in the naproxen arm, and one presumably due to side effects of upper gastrointestinal discomfort.

Both the flavocoxid and naproxen groups showed significant and similar reduction in the signs and symptoms of knee OA (p < 0.001) of approximately 85% from baseline for all four measurements. There were no statistically significant differences in the two groups with respect to any of the measurable outcomes.

Comment: Flavocoxid is considered a prescription medical food, a category considered distinct from drugs and supplements. It is a concentrated > 90% pure standardized blend of baicalin, a flavonoid extracted from Scutellaria baicalensis, and a catechin from Acacia catechu. It has been previously determined that mixtures of baicalin and catechin possessed significant COX-1, COX-2, and 5-LOX inhibitory activity. Practitioners are familiar with other plants and plant extracts possessing significant anti-inflammatory activity, so this should be no surprise. However, this is the first formal clinical trial investigating flavocoxid. A 30-day therapeutic trial of an herbal product demonstrating similar results to a common pharmaceutical analgesic, and on average 85% improvement in signs and symptoms of knee OA, is a great sign for practitioners and patients.


Seaweed Supplement for Knee Osteoarthritis

This small, double-blind, placebo-controlled pilot study investigated a supplement from seaweed (Aquamin) on symptoms of moderate to severe OA of the knees in 22 subjects. Measurements assessed included walking distance, range of motion, pain, and joint mobility of the knee in those individuals who were withdrawing from NSAIDs. Eight subjects were given 2400 mg/day of Aquamin and 14 given placebo for up to 12 weeks. Fourteen individuals completed the study, and analysis showed that there were no significant differences in pain and joint mobility scores, but did show small but statistically significant improvements in passive and active extension, and improved walking distance in the Aquamin group, but not the placebo group. There was a 50% reduction in NSAID use in the Aquamin group, although it should be noted that the Aquamin did not eliminate the NSAID use altogether.

Comment: Aquamin is a calcium- and magnesium-rich seaweed derived from the red algae Lithothamnion coralliodes. It also contains some trace minerals, including manganese, selenium, zinc, phosphorus, potassium, sulfur, iron, boron, sodium, cobalt, and copper. Many minerals have been shown to have some anti-inflammatory effects, including magnesium, boron, and manganese, all of which are found in Aquamin, although in quite small amounts. Whether it due to is the calcium, one or more of the other minerals, or a phytonutrient ingredient in the product, this study suggests that Aquamin is a potential treatment for moderate to severe OA of the knee, especially able to reduce the use of NSAIDS, and improve walking distance and range of motion.


Folic Acid Update

It has been known for a considerable time that folic acid given to women planning for and during pregnancy can lower the risk for neural tube defects. Incorporating the research done up to that time, the US Preventive Services Task Force (USPSTF) first published its recommendations in 1996. These were recently updated, and the USPSTF
issued a new statement in May 2009. Based on the observational evidence and randomized controlled trials published since 1996, the USPSTF found convincing evidence that supplements containing 0.4 to 0.8 mg of folic acid during the preconception period lower the risk for neural tube defects.

There now appears to be additional benefits for folic acid before conception and during pregnancy, possibly the prevention of cleft lip (BMJ 2007;334:464) and, most recently, lowering the rates of severe congenital heart defects. In a Quebec study, investigators observed a drop in the prevalence of severe congenital heart defects after mandatory folic acid fortification of grains. The average prevalence of severe congenital heart defects at birth was 1.64 per 1000 births during the 9 years before the folic acid food fortification began, and the rate fell by 6.2% yearly during the seven years studied after the mandatory fortification.


Comment: Following the recommendation that all women of child-bearing age should take a daily supplement containing 0.4 mg to 0.8 mg per day of folic acid is good, safe medicine and perhaps even more beneficial than previously thought.

B Vitamins and Age-Related Macular Degeneration

In a trial of more than 5400 women with cardiovascular disease or risk factors, participants were randomized to placebo or a combination of folic acid 2.5 mg/day, vitamin B6 50 mg/day, and vitamin B12 1 mg/day. The women were over age 40; two-thirds of them had a history of cardiovascular disease, and the remainder had three or more risk factors. Researchers performed a new analysis of the Women’s Antioxidant and Folic Acid Cardiovascular Study (WAFACS) to assess whether B vitamins lowered the incidence of age-related macular degeneration (AMD). With an average follow-up of 7 years, the incidence of AMD was 2% in the B vitamin group vs. 3% in the placebo group.

Comment: We know that elevated homocysteine levels are associated with the risk for AMD; and B vitamins, lower homocysteine levels. The current study suggests that supplementation with these three B vitamins can lower the risk for AMD, although it is not clear if this result is indeed related to homocysteine lowering or some other mechanism.


Institute of Women’s Health
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