Clinical Discoveries

New Treatment for Macular Degeneration

In the course of researching medical issues for this newsletter and for my practice, I often run across new therapies that are absolutely amazing. Many of these, however, don't have the widespread use and availability or they're just too expensive right now to be considered front-page news. But they are so important, you need to know about them. So this section of the newsletter, called "Clinical Discoveries," will cover the latest breakthroughs my colleagues and I are finding every day in our clinics.

Macular degeneration is a disorder worth preventing. It's a chronic and progressive disease leading to irreversible vision loss. There are a multitude of supplements on the market that provide nutritional protection to the eye, based on sound research, that can slow or prevent the disease.

But I want to tell you about something new.

I recently spoke with Robert, a 78-year-old male from Connecticut who has been under treatment with MicroCurrent Stimulation (MCS), since August 1998. After one-and-a-half weeks treating acupuncture points on the skin around his eyes with an imperceptible current, he was able to read two additional lines on the eye chart.

"I was thrilled," he reports. His vision improved from 20/100 to 20/60 and has held without deterioration for over two years. It's also reduced his once daily electrical applications to a few times a week. He now uses a programmed machine that on its own treats all the points, instead of his original machine, which required manual point-by-point treatment.

Diane, a 73-year-old female, was diagnosed with dry macular degeneration. After starting MCS in February 2001, she noticed significant improvement. The vision in her right eye improved from 20/25-2 to 20/20-1 and her left eye went from 20/40-2 to 20/25-1 in just three months. She began with two treatments daily and within a few weeks, dropped to three treatments per week.

MCS delivers a tiny current to a specific area. In biological systems, we often see that less is better. Over time, the current widens its path until the electrons of the current pass through the eyes in addition to the skin. All cells of the body must make and use an energy chemical named ATP, which stores and releases almost all the energy the cells need for life functions. Cell functions include making proteins, electrical transmission, maintaining the all important electrical charge on the cell membrane, and purging the cell itself of waste products.

"ATP fuels cellular garbage trucks," says opthamologist Edward Kondrot, a designer and researcher of MCS. With free-radical processes of aging, UV energy, and additional assaults from improper nutrition, our eyes need protection. What is more, with aging, the ability of cells of the macula to manufacture ATP wanes. Cells conserve energy by maintaining only the most critical functions, like maintaining membrane integrity. (Think of patching up holes in your windows to keep the cold out.) The cellular garbage trucks, which are not critical for the cell to survive in the moment, become idle. Waste products accumulate and, over time, the cells can die.

Years ago, another therapy similar to MCS, TENS (trans electrical nerve stimulation) was very popular for the treatment of pain. TENS involved placing pads on the skin and applying perceptible electricity to mask pain. Studies in rats using TENS in 1982 demonstrated significant cellular changes. A current of only 50-500 microamps produced an increase in mitochondrial (the cellular energy furnaces) activity and an increase in ATP levels of 300-500 percent with an increase in protein synthesis, which meant an increase in productive cellular activity (such as repairs).

A Belgian study demonstrated that MCS increases ATP concentrations in cells, and thus increased the ability of the cells to rid themselves of waste products. These observations led to very recent research into the effects of MCS on macular degeneration, the disease which, heretofore, had good but limited results with only nutritional therapy.

In his book, *Miracle Eye Cure,* Dr. Kondrot reports he has seen impressive results with both the wet and dry forms, but the less advanced dry form does seem to do better. Additionally, if the patients can see the big E on the eye chart (vision 20/400 or better), the prognosis for visual improvement is very good, with 70 percent of patients making improvement. Persons with worse starting vision will still

see improvement, but it's likely to be slower, and require more treatments.

Patient Richard Hazlett of Tarentum, Pennsylvania, makes unabashed praises for MCS. Now 60 years old, he started developing MD in his left eye at age 45 and with the right eye joining, he started MCS in July 2001. When he started the treatment, his eyesight was 20/400 and, even with bifocals, he was unable to read. Within several weeks, he was able to read 25-30 verses of the Bible before fatiguing. At first, with no focal vision, he was unable to see if the car in front of him had a license plate. After five months, he can now read the numbers on the plates. His rating of MCS: "Terrific!"

MCS is not TENS. TENS is a less-sensitive machine that delivers a fixed-current voltage. MCS must read tissue resistance and adjust the current according to the body's response. MCS is designed with a smart chip to read subtle changes in the electrical forces and resistance so that the electricity flows like a fine mist of a plant sprayer, rather than the brute force of a fire hose. The idea is to gently saturate the tissues with useful energy the cells can utilize to regenerate.

Additionally, a proper device should provide ½ Hz. Biphasic or bipolar pulses that change the current flow each second. This prevents uncontrolled DC current from producing electrical burns in the skin. The device recommended by Dr. Kondrot made by Seattle's Microstim Company produces a range of frequencies designed for multiple purposes.

In Chinese medicine, inflammation is called congestion. Specific body tissues develop high conductivity to attract and accumulate the body's electrical forces (becoming red and inflamed like a toaster filament with overabundance of electricity. This prevents normal electrical conduction to surrounding tissues. The Microstim units have two higher frequencies, which send pulses very rapidly into tissues to disperse the congestion. The congested tissues receive more electricity than they can handle, and the storage, exceeding their capacity, leads them to suddenly discharge the excess energy, allowing electron flow to deeper tissues much in need of the energy.

Lower frequencies of the device energize tissues like a trickle charger. Energy moves in slowly, not resulting in a discharge to surrounding tissues, but a recharging of the degenerated cells. If the cells can be recharged before they die, they can be restored to working capacity.

Here is an amazing figure. The macula contains *100 million times* more pixels, per unit area, than a high-resolution computer monitor! Those cells (rods and cones) are working at breakneck speed sending electrical impulses to the brain. Each impulse reduces the charge on the cell membrane. If not recharged, the cell will lose its function, become disabled and eventually die. Imagine you're running up a hill and breathing hard. If the hill gets steeper or the air thinner, it will take you longer between each step. The same recovery time applies to each cell doing a similar aerobic.

How does MCA help those cells so effectively? Currently, there are several proposed mechanisms. It enhances glucose uptake for greater energy production. Nerve conduction velocity (speed of running) is increased. Arterial muscles are relaxed, allowing greater blood flow. Protein synthesis (cellular regeneration) is increased, and the recovery time for its "exercise," electrical impulses, is shortened. Analogy to physical exercise — you get a permanent "second wind" going up that hill.

To date, although anecdotal evidence is high for the effectiveness of MCS, manufacturers cannot make claims until proper "double-blind placebo controlled studies" are completed to the satisfaction of the FDA. Such studies are underway. However, because the machines are available and relatively inexpensive for such a debilitating and preventable condition, you should know about it so that you need not risk further damage to your vision waiting for the FDA's stamp of approval. Dr. Kondrot and colleagues have developed a comprehensive program of exercises, nutrition, and MCS to help the eye recover.

There is the possibility that MCS could help the age-related need for reading glasses (presbyopia). While little work has been done on that condition, it affects virtually everyone over 50 on some level. I am no exception and will be trying MCS for my documented presbyopia and will be reporting my progress back to you.

MCS devices cost as little as $600 for high-quality machines for indefinite home use. I do recommend obtaining the machine from a holistic opthamologist (such as Dr. Kondrot) so that you receive proper instruction, evaluation, follow-up, and instruction on any facilitating therapies.

If it's impractical to see one of the opthamologists who offer this unique item, you can contact Dr. Kondrot by calling 800-430-9328 or e-mailing him at Ekondrot@pipeline.com.

I recommend MCS along with nutritional therapies for all my MD patients. This is a wonderful breakthrough to avoid crippling vision loss.