Is Microcurrent Therapy Effective for Treatment of Macular Degeneration?

By Darren Starwynn, OMD, LAc

Age-related macular degeneration (AMD) is one of the most common forms of vision loss in this country, affecting mainly the elderly. About 12 million Americans have AMD, and that number is expected to escalate to 30 million within the next few years. Patients with AMD gradually lose their vision, with a large black spot covering part of their visual field that progressively gets worse.

There are few medical treatments for the disease. Coagulating laser therapy is the usual treatment for macular degeneration offered by ophthalmologists, but it does not work consistently and often produces harmful effects. Microcurrent electrical stimulation has shown great promise as an alternative that can slow down the progression of the disease, and can actually promote healing. Preliminary studies have shown that microcurrent stimulation of the eye region can be effective in treating retinal diseases ranging from macular degeneration (both wet and dry) to retinitis pigmentosa, Stargardt’s disease, retinal vein occlusion and swelling, and other retinopathies.

The October 2002 issue of the Townsend Newsletter featured an article by Edward C. Kondrot, MD, that summarized three studies on the use of microcurrent for AMD.

1. A two-year study (1983 to 1985) involving 114 patients, conducted by Grace Halloran, PhD. The results of the study were as follows:
   - Eighteen patients had macular degeneration; 16 improved.
   - Seventy-eight patients had retinitis pigmentosa; 62 showed improvement.
   - Eighteen patients had other various retinopathies; 16 improved.
   - Of the patients who did not demonstrate any improvement, 14 stayed the same (although they otherwise would have been expected to lose vision); two continued to lose vision, although only slightly.

2. A 10-year clinical study was conducted by Drs. Jarding and Michael on the use of microcurrent to treat macular degeneration. Of the 400 eyes evaluated over the course of the study, the results were as
follows:

- Seventy-eight percent of the eyes showed from 1-9 lines of improvement in reading of a visual acuity chart.
- Over 50 percent improved from 2-9 lines of improvement.
- In the study, two patients suffered from retinal vein occlusion and swelling of the macula. Both had dramatic improvement in vision.

3. Damon Miller, MD, reviewed the results of using microcurrent stimulation in the treatment of Stargardt’s disease, retinitis pigmentosa and other degenerative retinal diseases. His results indicated the following:
   - Of the 120 patients treated, 83 percent showed improvement of greater than or equal to two lines of visual acuity in one or both eyes.

Treatment points for macular degeneration probe technique. - Copyright â Stock Photo / Register Mark
Edward Paul Jr., OD, PhD, presented a paper to the International Society for Low Vision Research and Rehabilitation in Sweden titled "The Treatment of Retinal Diseases with Micro Current Stimulation and Nutritional Supplementation."¹ In it, he proposed that microcurrent works in this regard by increasing ATP production, enhancing protein synthesis and helping cells absorb needed nutrients. These processes improve RPE (retinal pigment epithelium) efficiency, which might help restore retinal function.

Decline in ATP production in retinal cells might result from damage by free radicals in the aging process, and through deficiency of antioxidant vitamins and minerals.

Other researchers have suggested that microcurrent stimulation may boost the cells’ ability to rid themselves of waste products. Another benefit is increased blood circulation to the eye area. By increasing blood flow to the area, cells and tissues are nourished and refreshed, and oxygenation is increased.

Bones of lower legs, ankles and feet. - Copyright â Stock Photo / Register Mark Microcurrent stimulators are approved by the FDA for treatment of chronic or intractable pain or postsurgical pain. The FDA does not approve them for treatment of AMD or other disease processes. This would be considered an "off-label" use of the device. Manufacturers of microcurrent devices cannot legally sell them with the claim that they are indicated for treatment of AMD. Yet it’s legal for health care practitioners to use a microcurrent device for such off-label uses, provided they do not actively advertise the use of the device for the off-label purpose.
There appears to be two types of techniques used to apply microcurrent stimulation to the eye region. In the first technique, pad electrodes are placed to cover each eye and socket completely, with one electrode over each eye. The second approach is to use a probe-type applicator to stimulate a series of acupuncture points around the eyes.

Here is an AMD protocol discussed in a popular book on microcurrent electroacupuncture.\textsuperscript{2} This is only one of many possible approaches, but it’s very effective. I have added in the use of some distal acupoints.

\textbf{Bones in hand and wrist. - Copyright à Stock Photo / Register Mark} In addition to the distal points listed on page 35, you might want to add needle or non-needle stimulation of the reverse body image eye points, which are located just to either side of the acupoint Du 2 on the coccyx area.

The book did not deal with the addition of color light therapy to microcurrent electroacupuncture. Although we do not have enough clinical studies to confirm the degree of effectiveness of color light acupuncture for the treatment of AMD, based on observations of boosted effectiveness for other conditions, I would certainly recommend you add it to all of your probe AMD treatments. I also suggest you use kinesiology and therapy localization to select the most resonant color for each patient. This involves having the patient touch the eye area after initial kinesiology clearing, and using the patient’s other hand for O-ring testing. Then lay various color filters on the eye until the strongest muscle test is seen. Green, turquoise and red all are colors that might benefit the eyes, but it’s best to do the individual testing before selecting the color.

\textbf{Protocol: Eye Diseases}

There have been many reports of successful improvements in patients with eye diseases through microcurrent treatment, specifically macular degeneration and other retinal diseases, and nearsightedness. The protocol given here also might benefit patients with glaucoma or conjunctivitis, as it’s a general tonic to the nerves of the eye. This protocol must be used with caution, monitoring for any adverse effects. Many eye diseases, particularly in the elderly, are linked to the side-effects of pharmaceuticals. Consider alternative approaches to unnecessary drug intake to protect vision.
Treatment Methods

1. Have the patient hold a brass hand mass of device in the hand of the side of the eye being treated. Set polarity to negative, waveform to slope, and frequency to 80 Hz. Set timer of device to 12 seconds.

2. Using trigger probe with cotton tips, treat a series of local acupoints around the orbit in direction from medial, upward and outward. This means you start with the inner canthus, then go to eyebrow points, then the outer canthus, and continue around the eye until all points are stimulated for 12 seconds each. The points often will be tender when treatment is commenced. Adjust microcurrent intensity to a level at which the patient feels no electrical stimulation, but can see gentle flashing light in the eye from the retina being stimulated. The correct intensity level will vary from person to person.

3. After all points are treated, have the patient switch hands holding the hand mass, and repeat treatment on the eye of that side of the body.

4. Adjust frequency down to 8 Hz and repeat above procedure.

5. Adjust frequency down to 0.6 Hz, switch polarity to biphasic and treat each eye again. This time, discontinue use of hand mass, and use two probes in combination around the eye. Use the two probe tips to treat sets of the same orbital acupoints that will pass current through the eye directly. Treat from above to below, left to right, and other diagonal placements. During this stage, place one probe on occipital hollows (GB 20), with other on eye points that remain tender and treat for 6-12 seconds each.

This treatment might be augmented by treating the following acupoints with needles or microcurrent: K 6, GB 37, TW 3, SI 3, LI 4. You might use kinesiology to determine the appropriateness of these points.

Adjunctive Treatments

Eliminate or reduce foods that can damage one’s vision, such as animal fats, sugar, fried and processed foods, wheat, alcohol, tobacco and excessive coffee. Many nutritional supplements can support healthy vision. These include vitamins A, E and C, zinc, selenium and other antioxidants, and ginkgo biloba. Cataracts might be prevented in many cases by large doses of flavanoids, vitamin E, N-acetylcysteine and vitamin B2.

References

1. The entire article is available online at www.mdsupport.org/clinic/paulstudy.pdf.
Click [here](http://www.acupuncturetoday.com/mpacms/at/article.php?id=30375&nopaginate=true&p_friendly=true) for more information about Darren Starwynn, OMD, LAc.