Acupuncture Beats Drug For Dry Eyes

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Acupuncture outperforms drug therapy for the treatment of dry eye syndrome. Researchers from the Affiliated Eye Hospital of Nanjing Medical University compared the efficaciousness of acupuncture with sodium hyaluronate eye drops for the treatment of dry eye syndrome. Sodium hyaluronate achieved a 30.0% total effective rate and acupuncture achieved a 68.3% total effective rate. Acupuncture outperformed drug therapy for the improvement of lacrimal gland secretion and tear film (liquid layer covering the corneal surface) stability.

Results were determined by analysis of tear meniscus height (TMH), tear breakup time (BUT), and conjunctival congestion scores. TMH is a measurement for determining the volume of tears contained within the upper and lower menisci. Lower TMH indicates dysfunction of tear secretion or drainage, which may indicate dry eye disease. BUT is a diagnostic tool for determining the time taken for tear film to begin breakup. Shorter BUT potentially indicates dry eye disease where there is instability or changes occurring within the tear film. Conjunctival congestion scores measure the severity of conjunctival congestion. Higher scores indicate increased severity of conjunctival congestion.

After treatment, TMH and BUT scores significantly improved in the acupuncture group and were substantially better than in the drug control group. Acupuncture produced superior outcomes regarding conjunctival congestion scores. The conjunctival congestion scores were significantly lower in the acupuncture group than in the drug control group. The researchers
concluded that “the therapeutic effect of acupuncture is superior to sodium hyaluronate for the alleviation of dry eye syndrome.” [1]

Researchers (Zhu et al.) used the following study design. The study involved 60 patients at the Traditional Chinese Medicine department of the Affiliated Eye Hospital of Nanjing Medical University. All patients were diagnosed with dry eye syndrome between September 2016 and September 2017. They were randomly divided into an acupuncture treatment group and a drug control group, with 30 patients in each group. The drug control group received sodium hyaluronate eye drops. Sodium hyaluronate eye drops, also known as artificial tears, are used to relieve relevant symptoms such as dry or sore eyes. The acupuncture treatment group received only acupuncture.

Medical Care
For the sodium hyaluronate group, patients received 1 drop of sodium hyaluronate eye drops, three times per day, for a total of 30 consecutive days. The acupuncture group received acupuncture treatment at different body parts.

For the face, the following acupoints were selected:

- Jingming (BL1)
- Cuanzhu (BL2)
- Taiyang (EX-HN5)
- Sibai (ST2)
- Fengchi (GB20)

For the head, the following acupoints were selected:

- Shenting (GV24)
- Baihui (GV20)

For the abdomen, the following acupoints were selected:

- Guanyuan (CV4)
- Qihai (CV6)

For the limbs, the following acupoints were selected:

- Hegu (LI4)
- Waiguan (TB5)
- Quchi (LI11)
- Zusanli (ST36)
- Sanyinjiao (SP6)
- Taichong (LV3)
Treatment commenced with patients in a supine position. After disinfection of the acupoint sites, needles were inserted into each point with a high entry speed. For Jingming, a 0.25 mm x 25 mm filiform acupuncture needle was inserted along the orbital margin, to a depth of 14–18 mm. No manipulation technique was applied to this acupoint.

For Shenting and Baihui, a 0.30 mm x 25 mm filiform acupuncture needle was inserted at the entry angle of 15–30 degrees, following the path of the Du meridian posteriorly and reaching a depth of 18–20 mm. The needle was then rotated with a small range and high frequency.

For Fengchi, a 0.30 mm x 40 mm filiform acupuncture needle was inserted obliquely towards the opposite eye, reaching a depth of 30–32 mm. The needle was rotated, lifted, and thrust to achieve a deqi sensation.

For Cuanzhu, a 0.25 mm x 25 mm filiform acupuncture needle was inserted toward the Jingming acupoint for 18–20 mm. The needle was slightly rotated to achieve a deqi sensation. For Taiyang and Sibai, a 0.25 mm x 25 mm filiform acupuncture needle was inserted perpendicularly to a depth of 18–20 mm. The needle was slightly rotated to achieve a deqi sensation.

For Heguan, Quchi, Waiguan, Qihai, Zusanli, Sanyinjiao, and Guanyuan, a 0.30 mm x 40 mm filiform acupuncture needle was inserted perpendicularly, reaching a depth of 30–32 mm. The needles were rotated, lifted, and thrust to achieve a deqi sensation. For Taichong, a 0.30 mm x 25 mm filiform acupuncture needle was inserted perpendicularly, reaching a depth of 15–18 mm. The needles were rotated, lifted, and thrust to achieve a deqi sensation.

All needles were retained for 30 minutes. One acupuncture session was conducted every other day. The treatment lasted for 30 days with a total of 15 acupuncture sessions. After completion of treatment, the efficacy rates for each patient were categorized into 1 of 3 tiers:

- **Recovery**: Disappear of relevant symptoms. TMH>0.2 mm. BUT>10 s.
- **Effective**: Improvement of relevant symptoms. TMH>baseline levels and <0.2 mm. BUT>baseline levels and <10 s.
- **Ineffective**: No improvement of relevant symptoms, TMH, and BUT.

Objective and subjective data indicates that acupuncture is effective for the treatment of dry eye syndrome. Acupuncture, achieving a 68.3% total effective rate, significantly outperformed eye drops by 38.3%, which achieved a 30.0% total effective rate.

**About Dry Eye Syndrome**
Blinking provides lubrication by spreading tears across the eyes. Excess lubrication drains into ducts at the inner canthus, which then drains through the back of the nose. Imbalances of tear production and drainage or poor quality of the constituents of tears may lead to dry eyes.
Dry eye syndrome is termed keratoconjunctivitis sicca (KCS). This occurs when the water layer of tears is too low at the front of the eye; however, a disturbance of any lubrication layer may cause dry eyes. Tears are made of three constituent layers. Oil forms the lipid layer and prevents evaporation of the water layer beneath it. The mucus layer is beneath the water layer and allows for even lubrication across the eye.

Reference: