

Acupuncture tested for use in treating lazy eye in children

Greg Town

Acupuncture has been evaluated for its ability to treat amblyopia (lazy eye) and has shown comparable efficacy to conventional treatment with patching, according to the findings of a randomized controlled study conducted in China.

"The treatment effect of acupuncture ... is equivalent to the treatment effect of patching for amblyopia," commented the study authors, led by Dr. Jianhao Zhao, from the Joint Shantou International Eye Center of Shantou University and Chinese University of Hong Kong, Shantou, China.

In this single-center study, a total of 88 children (aged 7 to 12 years) with an amblyopic eye, with a baseline best spectacle-corrected visual acuity (BSCVA) of 0.3 to 0.8 logMAR, were randomly assigned to treatment comprised of either five acupuncture sessions weekly ($N=43$) or 2 hours of patching of the good eye daily ($N=45$) for up to 25 weeks. Children had constant optical correction during the trial and were instructed to do at least 1 hour of near-vision activities, such as reading or typing, daily. [*Arch Ophthalmol* 2010;128(12):1510-1517]

By week 15, mean BSCVA of the lazy eye had improved by 2.27 and 1.83 lines compared with baseline in the acupuncture and patching groups, respectively. An improvement of 2 or more lines was seen in 75.6 percent of those in the acupuncture group compared with 66.7 percent of patching recipients. Lazy eye was considered resolved in 41.5 percent and 16.7 percent, respectively. There were no serious adverse events associated with either treatment, although two children undergoing acupuncture reported moderate pain during the intervention.

The exact mechanism by which acupuncture may improve visual acuity in these patients remains unclear, said the authors. "Targeting vision-related acupoints may change the activity of the visual cortex, the part of the brain that receives data from the eyes. It may also increase blood flow to the eye and surrounding structures as well as stimulate the generation of compounds that support the growth of retinal nerves... Because of the good results obtained in our study, the acupoints that we used could be considered for clinical use," the authors concluded.

However, they did acknowledge that their study possessed certain design limitations. "Only patients with anisometropic amblyopia were involved ... and the follow-up period was relatively short. [In addition], acupuncture itself is a very complicated system of therapy. Differences exist among acupuncturists, and there are divergent manipulation modes, stimulation parameters, treatment styles, and subjective sensations evoked by acupuncture stimulation."

Singapore eye specialist Dr. Quah Boon Long, head and senior consultant with the Ophthalmology Service at the Singapore National Eye Centre and KK Women's and Children's Hospital, agreed that the study had some important limitations. As well as the small patient numbers, he suggested that the lack of an untreated control group was a crucial omission "because studies have shown that poor vision from amblyopia can continuously improve for several months with appropriate spectacle correction and consistent spectacle wear."

Quah also expressed concern regarding the safety of this intervention in this setting. "Acupuncture involves piercing some needles quite close to the eye. There is hence a

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risk of accidental penetrating needle injury to the eye, especially in an uncooperative child... Eye patching is painless and does not carry risk of eye injury or infection from contaminated needles. It is administered at home, so the child does not have the inconvenience of having to attend five acupuncture sessions at the clinic per week." 