

## Acupuncture Treatment for Optic Nerve Contusion

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Optic nerve contusion is a commonly-seen eye injury, which is mostly caused by traffic accident, collision, and falling. Early diagnosis and timely emergency treatment can make such patients restore vision to a certain extent. Otherwise, there may appear optic atrophy or loss of vision. At present, in the treatment of this disease, cortical hormone, dehydrating agent, vasodilator, vitamin, energy mixture and neurotrophic agent, or surgical operation can all give certain therapeutic effect. In the recent 5 years, the Department of Ophthalmology of the Hospital Affiliated to Hubei College of Traditional Chinese Medicine has adopted acupuncture for treatment of optic nerve contusion, and obtained quite good therapeutic results. Some typical cases are reported in the following.

### TYPICAL CASES

Case 1: A male patient, 42 years old. Half a month before, the patient fell down from a place of 3 meters high. He got blurred vision of the left eye. He subjectively felt that he didn't get decrease in vision of the right eye. The CT examination didn't find intracranial fracture. He was diagnosed at a certain hospital as having 'left optic nerve contusion', and treated by neurotrophic agent and vasodilator, but with no marked therapeutic effects. In our hospital, the examination showed: the left eye vision 0.01, obtuse left pupillary light reaction, disappearance of pupillary direct-light reflex, and existence of pupillary indirect-light reflex; normal optic papilla and normal color of retina of the eyeground, and visible macula retinae depression reflex.

Acupuncture was adopted for the treatment. The

points selected were Jingming (BL 1), Taiyang (EX-HN 5), Zanzhu (BL 2), Qiuhou (EX-HN 7), Baihui (GV 20), Ganshu (BL 18), Fengchi (GB 20), Hegu (LI 4), Quchi (LI 11), Taichong (LR 3), and Guangming (GB 37). The 1-1.5 *cun* long filiform needles were used. Points on the head part were needled superficially, while the body points were needled deeper. The needles were retained for 50 min, during which manipulation was applied every 10min. upon withdrawal of the needle, point Jingming (BL 1) was pressed for a moment to avoid bleeding. The treatment was given once daily. Six days later, effects were shown gradually. After 30 times of such treatment, the vision restored to 0.6. The follow-up survey for half a year showed no decrease of the vision.

Case 2: A male patient, 46 years old. He was hit on the head by others with a wooden stick and became unconscious for 5 hours. When he came to, he found his right eye lost vision. He received epluchage and suture in a local hospital. Five days later, he came to the Department of Ophthalmology in our hospital for treatment. Special examination showed that the right eye had light sensation, platycoria, disappearance of direct-light reflex, and existence of indirect-light reflex. The eyeground examination showed slightly pale color of the retina, and livid ecchymosis. The CT examination showed no fracture of the right optic canal. The diagnosis was right optic nerve contusion. The treatment that he received in other hospital 5 days before with hormone, dehydration and neurotrophic agent didn't show any improvement in his right eye vision. In the treatment, considering the deficient

state of the patient's spleen and stomach, in addition to the points we used for the above case, we added point Zusanli (ST 36). The needling technique and needle-retaining time were the same as the above case. Each time after the treatment, the patient would subjectively feel a rise of the vision. After 40 day's consecutive treatment, the patient's vision was kept stable at 0.3. The follow-up survey for one year found no adverse change of the vision.

### COMMENTS

The optic nerve has its unique distributing route, with the intraorbital section in an S shape, and has very strong activity. The orbital orifice of the bony canal is narrower than the cranial orifice, and dura mater of brain of the optic nerve is closely connected with the surrounding bony wall, which makes easy for the striking power that deform the substance of bone transfer to the optic nerve. This anatomic structure is attributed to trauma of the optic nerve. After contusion due to trauma, the optic nerve may have hemorrhage or edema, and the blood circulation will be further restricted, leading to further injury of the optic nerve. Usually, there is little chance for the restoration of optic nerve after traumatic injury.

The treatment principle should be to promote the circulation of *qi* and blood so as to improve the eyesight. In the treatment, the points on the head are mainly selected, combined with the body points, for

promoting free flow of *qi*, balancing *yin* and *yang*, so as to restore the function of the optic nerve cells in a inhibited and sleeping state.<sup>1</sup> Jingming (BL 1), Taiyang (EX-HN 5), Zanzhu (BL 2) and Qiuhou (EX-HN 7) are the commonly used points for eye diseases, and can give the effect of removing intensive heat from the liver and improving acuity of sight. Being a crossing point of the Shaoyang Channels of the Hand and Foot and the Yangwei Channel, Fengchi (GB 20) has the action of clearing and activating the channels and collaterals, and nourishing the liver and improving acuity of sight. Hegu (LI 4) and Quchi (LI 11) can regulate channel-*qi* of the Yangming Channel. And Ganshu (BL 18) and Taichong (LR 3) can regulate and tonify the liver and kidney. The mechanism of acupuncture in such treatment may be related with the fact that after acupuncture, the blood circulation in the eye is reinforced, which can promote the exchange of nutrients of the optic nerve. Although the mechanism of acupuncture has not been completely explained, the acupuncture treatment for optic nerve contusion is really simple and effective.

### REFERENCES

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