



Case Report: Treatment of Dysconjugate Gaze in a Patient with Graves' Orbitopathy using Integrative East-West Medicine

Mamta Singhvi, MD^{1,2}, Danielle Basurco, MD³, Catherine Hwang, MD⁴, Malcolm Taw, MD¹

¹UCLA Center for East-West Medicine, ²UCLA Department of Radiation Oncology, ³UCSF/Fresno Family and Community Medicine, ⁴UCLA Jules Stein Eye Institute

Objective

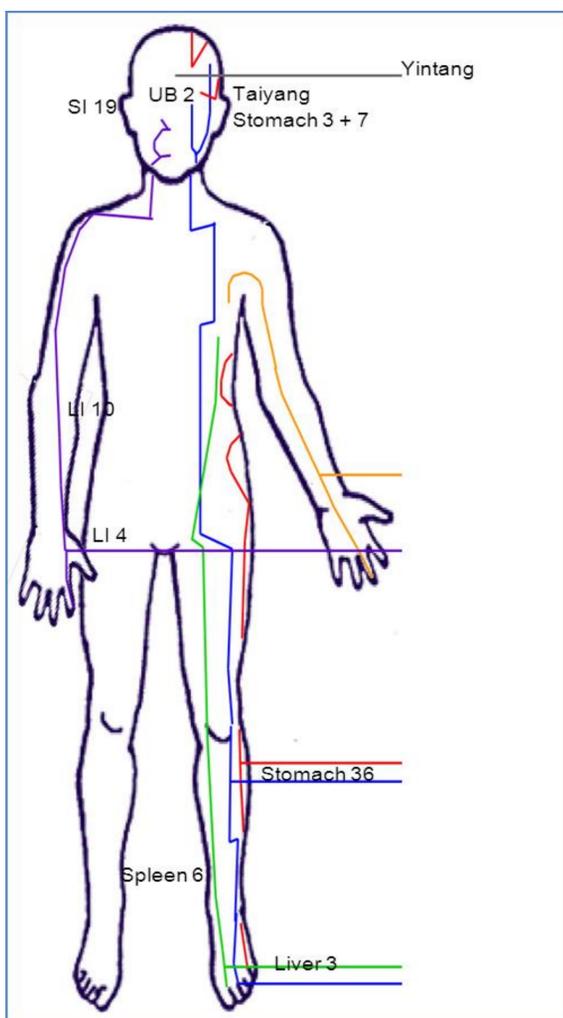
Graves' orbitopathy (GO) is an autoimmune inflammatory disorder characterized by upper eyelid retraction, edema, conjunctivitis, erythema, & proptosis¹. The pathology mostly affects persons between 30-50 years of age, with females 4x more likely to develop symptoms. Most patients are asymptomatic with only about 3-5% experiencing moderate-severe disease². Cigarette smoking raises the incidence 7.7-fold¹. In active disease, the inflammation and edema of the extraocular muscles lead to gaze abnormalities. The most commonly affected muscle is the inferior rectus, and patients may thus experience vertical diplopia on upgaze and limitation of orbital elevation due to muscle fibrosis. The double vision is initially intermittent but can gradually become chronic¹. Although some patients may undergo spontaneous symptom remission, many require treatment. The first step is to regulate thyroid levels. Corticosteroids may reduce inflammation, but are limited because of their side effect profile¹. Radiation therapy is an alternative but unproven option to reduce inflammation. Surgery is often performed to decompress the orbit, improve the proptosis, and address the strabismus causing diplopia³.

Case Presentation

A 63 year-old female smoker presented to her PCP with progressively worsening blurry vision eventually leading to vertical diplopia. She was diagnosed with Graves' disease and appropriately treated with radioactive iodine. Despite reaching a euthyroid state, there was no improvement in her ocular symptoms. She was evaluated by the UCLA Jules Stein Eye Institute. Steroid treatment was deferred as she lacked active inflammatory signs. There was also concern of potential side effects, including exacerbation of her hypertension and anxiety. The patient declined strabismus surgery in search of alternative therapies. A referral was made to the UCLA Center for East-West Medicine. Initial exam revealed right eye lid retraction, dysconjugate gaze with left eye mimicking a 3rd nerve palsy, spasm of the trapezius and splenius capitis muscles, and startle reaction with palpation of most acupressure points. Acupuncture and trigger point injections were administered weekly, with marked improvement in eye position, dysconjugate gaze, and diplopia after eight treatments. The patient reported that she was able to climb up and down stairs without the need of a handrail, and was able to walk over curbs without difficulty. During her most recent clinic visit, she stated that her diplopia had improved significantly and, most of the time, she saw a single image. She also reported giving serious consideration to driving again.

Figures

ACUPUNCTURE POINTS UTILIZED



PRE-TREATMENT



POST-TREATMENT



Discussion

A literature search for moderate-to-severe GO using complementary and integrative medicine treatments proved to be limited⁴. However, the effect on the thyroidal axis by several alternative modalities including acupuncture, has been described^{6,7}. Lifestyle changes including smoking cessation⁵, and supplementation with vitamins and minerals such as L-carnitine, iodine, lithium, and B-complex vitamins¹¹ have shown promise in alleviating some symptoms of hyperthyroidism. Traditional Chinese herbal medicine in the form of Jia Wei Xiao Yao San, Xia Ku Cao, Bei Mu, and oyster shell⁹ has also been described as an effective option for hyperthyroidism. Case studies have illustrated that acupressure massage has a specific impact on ocular conditions related to hyperthyroidism, such as infiltrative exophthalmos and strabismus^{8,10}. The acupuncture points that were treated in our patient include LI 4, Liver 3, LI 10, Stomach 36, Spleen 6, SI 19, Stomach 7, Taiyang, Yintang, GB 20, UB 2, GB 2, Stomach 3, SJ 17, and Ear Shenmen. This anecdotal evidence in the context of multiple case studies, including our own, warrants further research to elucidate the potential benefit of alternative treatments of moderate-to-severe GO.

References

1. Rebecca S. Bahn, et al, Graves Ophthalmopathy. *N Engl J Med*, 2010 February; 362:726-738.
2. Luigi Bartalena, et al. Graves' ophthalmopathy: a preventable disease? *European Journal of Endocrinology*, 2002;146 457-461
3. Behbehani R, et al. Orbital radiotherapy for thyroid-related orbitopathy. *Current opinion in ophthalmology*, 2004;15(6): 479-82
4. Tanda ML, et al. Prevalence and natural history of Graves' orbitopathy in a large series of patients with newly diagnosed graves' hyperthyroidism seen at a single center. *J Clin Endocrinol Metab*. 2013 Apr;98(4):1443-9.
5. Wiersinga WM. Graves' orbitopathy: Management of difficult cases. *Indian J Endocrinol Metab*. 2012 Dec;16(Suppl 2):S150-2
6. Moncayo R, et al. New diagnostic and therapeutic approach to thyroid-associated orbitopathy based on applied kinesiology and homeopathic therapy. *J Altern Complement Med*. 2004 Aug;10(4):643-50.
7. Luzina KE, et al. The influence of acupuncture on the quality of life and the level of thyroid-stimulating hormone in patients presenting with subclinical hypothyroidism. *Vopr Kurortol Fizioter Lech Fiz Kult*. 2011 Sep-Oct;(5):29-33.
8. Zhang SJ, et al. Clinical observation on acupuncture for treatment of paralytic strabismus. *Zhongguo Zhen Jiu*. 2009 Oct;29(10):799-803.
9. Chang CC, et al. Is Traditional Chinese Medicine effective for reducing hyperthyroidism? *J Altern Complement Med*. 2010 Nov;16(11):1217-20.
10. Xu WM, et al, Efficacy observation on infiltrative exophthalmos treated with acupuncture and acupoint massage. *Zhongguo Zhen Jiu*. 2011 Feb;31(2):101-4.
11. Balch, JF., et al., *Prescription for Natural Cures*. 2011: 335-337.