CLINICAL VIGNETTE

Integrative East-West Approach to Acute Treatment of Bell's Palsy

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Introduction

Bell's palsy is one of the most common causes of acute unilateral facial weakness with both distressing physical and mental sequelae. We describe a patient with acute Bell's palsy successfully treated with an integrative East-West approach.

Case Presentation

A 45-year-old female with a history of fibromyalgia, ankylosing spondylitis, Raynaud's disease, irritable bowel syndrome (IBS), plantar fasciitis, and Hashimoto's disease presented with right facial and tongue numbness and weakness for 11 days.

Upon first day of onset, patient noticed right sided watery eye and numbness on the right lateral aspect of her tongue. The next day, she woke up and felt right facial paralysis, including eyebrow sagging, inability to close her eye, and right drooping at the corner of her mouth. Associated symptoms included hyperacusis, loss of taste, and pain in the temporomandibular joint and retroauricular region on the right side. The patient went to the emergency room and was diagnosed with acute Bell's palsy. She was given a 7-day course of prednisone as well as valcyclovir, which she completed. Afterwards, the patient felt slight improvement in the facial weakness and watery eye but had persistent pain, significant residual weakness, and inability to close her eye. She denied having a similar event or similar symptoms in the past.

Prior to the onset of Bell's palsy, her other diseases, including fibromyalgia, IBS, and plantar fasciitis, were in the midst of a "flare up." She stated feeling extremely frustrated and struggled emotionally in dealing with her chronic pain and active disease state. Moreover, her long time dog companion had passed away a few weeks prior causing her significant stress, anxiety, and grief.

Her medication list included celecoxib, cyclobenzaprine, tapentadol, pregabalin, certolizumab pegol, sulfasalazine, levothyroxine, liothyronine, levocetirizine, fluticasone propionate nasal, and hydrocodone as needed. In addition to the prescribed medications, the patient had been using polyethylene glycol eye drops to keep her eye lubricated.

On day 10**,** the patient presented to our clinic. On initial physical exam, vital signs were within normal limits. Pertinent positive findings included severe right facial droop with paralysis involving the forehead, tearing of the right eye, and decreased sensation to light touch on the right face. Her exam findings were consistent with House-Brackmann classification of V with gross facial weakness and asymmetry at rest, paralysis of forehead muscles, incomplete closure of right eye, and slight movement of mouth with effort. Otherwise, she was neurologically intact. Lab studies in the emergency room on her second day of symptoms including a CBC with differential, coagulation times, and chemistry panel were all within normal limits. No imaging studies were performed.

A holistic treatment regimen, including acupuncture, acupressure, trigger point therapy, Chinese nutrition, mind-body practices, and overall emphasis on stress reduction was initiated. Acupuncture utilized the following main points: Large Intestine 4 and 10, Stomach 36, Liver 3, Spleen 6, San Jiao 3, and Yintang. Local facial points included right side San Jiao 17, Small Intestine 19, Stomach 4 and 6, Large Intestine 20, and Tai Yang. Active trigger points were found on the neck and shoulder regions and injected with 0.2mL of vitamin B12 in her trapezius, splenius cervicis, and splenius capitis muscles.

She was instructed to apply facial acupressure massage and avoid wind blowing on her face. Chinese dietary recommendations were given, such as avoidance of raw, temperature cold, and inflammatory foods (coffee, processed/packaged foods, processed sugars, and fried foods) while incorporating more ginger, mint, and flower teas. Finally, she was counseled on the importance of stress management and addressing the root issues that contribute to her stress.

On day 30**,** status post two treatments performed two weeks apart, the patient noted resolution of her facial pain and hypersensitivity, eye tearing, and facial weakness. She was able to close her right eye, crinkle her nose, smile fully without asymmetry, and had normal sensation to light touch. Per her report, she had incorporated much of the self-care recommendations, including meditative practices, overall stress reduction, and an anti-inflammatory diet including ginger and calming teas. See Figure 1 below for before and after treatment pictures.

Discussion

Bell's palsy is a spontaneous idiopathic and unilateral weakness or paralysis of the seventh cranial nerve. Incidence ranges between 13-34 new cases per 100,000 people per year[1-3] and represents 49-75% all facial nerve palsies.[4-6] Clinical symptoms can improve spontaneously within 3 weeks in 85% of cases and 71% have complete recovery of facial function.[1] However, a significant number of those afflicted have residual moderate to

severe deficits including disfiguring facial asymmetry, incompetence of the oral commissure (drooling), brow ptosis, incomplete eyelid closure, hemifacial spasms, and gustatory lacrimation.[1,2]

Prognosis of Bell's palsy is often measured by the House-Brackmann grading system, which serves as a clinical indicator of severity as well as an objective record of progress.[7] Grades I and II have good outcomes, grades III and IV have moderate dysfunction, and grades V have severe dysfunction and a poor prognosis. Typically, prognosis is favorable if some recovery is seen within the first 21 days of onset[9] while poor prognostic factors include older age, hypertension, impairment of taste, pain other than in the ear, and complete facial weakness.[2]

These distressing sequelae have prompted a search for reliable therapeutic options, especially in the acute setting. Currently acute treatment includes glucocorticoid and antiviral therapy, but options are limited for patients that do not recover normal function.[8]

Alternative therapies such as surgical decompression, physical and occupational therapy, thermal therapies, or exercise and massage therapy are suggested as second line options, though current evidence does not support their use.[9-11] Acupuncture is another modality that has been studied for the treatment of Bell's palsy. It is thought to strengthen the body's resistance to pathogenic factors, increase the excitability of the nerve, promote regeneration of the nerve fibers and formation of its collateral branches, enhance muscle contraction and blood circulation, and accelerate metabolism and recovery of body functions.[12-13]

Although the most recent Cochrane review in 2010 investigating the efficacy of acupuncture for Bell's palsy was inconclusive due to poor quality studies,[14] there have been numerous smaller randomized controlled trials showing acupuncture as a safe and effective intervention for treating Bell's palsy sequelae.[15-17] There is also a growing literature describing the effects of acupuncture on stress regulation,[18] the anti-inflammatory response,[19-20] and pain modulation,[21-25] which may help explain how it diminishes the symptoms associated with Bell's palsy.

Although the exact etiology and pathophysiology of Bell's palsy is controversial and unclear, the histopathology of the facial nerve is consistent with an inflammatory mechanism.[26] As such, lifestyle modifications focused on minimizing inflammation should be strongly considered as part of a holistic self-care plan. Sleep disturbance[27] and significant psychosocial stress[28-29] have been linked to elevated levels of inflammation in the body. Moreover, one study found that psychological stressors are an independent risk factor associated with Bell's palsy.[30] Therefore, in addition to performing a stress intake, addressing sleep hygiene and emphasizing overall stress reduction would be prudent.

Finally, Chinese dietary recommendations, such as ginger, chrysanthemum, and mint may also help address the inflammatory and heightened stress associated with Bell's palsy. Ginger has been found in vivo and in vitro studies to have possible antioxidant, anti-inflammatory, antiemetic, and anticancer effects.[31] Traditional calming teas, such as chrysanthemum and mint, are commonly used to help mitigate the stress response. Early in vivo studies suggest chrysanthemum may alter the regulation of inflammation,[32] and chromatography studies identifying active compounds in mint have been shown to have high levels of antioxidants with anti-inflammatory effects.[33]

Conclusion

Options are limited for acute treatment of Bell's palsy. Its impact both physically and psychologically can be significant for patients who do not recover fully from its sequelae. Current practice guidelines primarily focus on pharmacotherapy. Here we report a case utilizing a comprehensive, integrative approach incorporating acupuncture, self-acupressure, and other lifestyle recommendations to address sleep, nutrition, and stress reduction as an adjunctive measure in successfully managing a patient with acute Bell's palsy.

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Figures

Figure 1. Pictures from Day 1, Day 9, and Day 30 as reported by patient.

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