Research

Integrated Chiropractic and Acupuncture Treatment for a Patient with Persistent Symptoms of Bell’s Palsy: A Case Report

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Abstract

Introduction: This paper reports on a 53-year-old male who presented with sequelae from a case of Bell’s palsy two years prior. He was treated with a combination of chiropractic and acupuncture therapies.

Case Presentation: The patient’s prescribed medication relieved most of his symptoms but at presentation he still experienced occasional slight twitching of the right eye, focal numbness with occasional twitching of the right cheek, difficulty holding water in his mouth while drinking and occasional dripping of saliva. The chiropractic diagnosis was Bell’s palsy, myofascial pain syndrome and vertebral intersegmental dysfunction at the C0-C1 level. His acupuncture diagnosis was Wind Phlegm syndrome.

Interventions and Outcomes: Chiropractic treatment consisted of adjustments to the occiput-C1 level, Myofascial Release Technique and home facial exercises. Acupuncture treatment consisted only of needling. The patient responded rapidly to therapy and was almost symptom-free after three months.

Discussion: Most patients recover spontaneously from Bell’s palsy, but in some patients residual symptoms remain that do not respond to conventional medical therapy. This patient’s symptoms were greatly improved following an integrated therapy approach that included chiropractic and acupuncture treatment. Further research is needed to investigate the effectiveness of this approach.
Introduction

Bell's palsy, also known as idiopathic facial palsy, is a commonly encountered lower motor neuron lesion of the facial nerve resulting in the inability to control the facial muscles on one side of the face.\(^1\,\text{2}\) About 50% of all facial paralysis cases are due to Bell’s palsy.\(^2\) The most common theory for its etiology is an infection with HSV-I.\(^1\) The estimated incidence of Bell’s palsy in the US is between 13 and 34 cases per 100,000 people, and the most common age group affected are those between 15-45.\(^1\,\text{2}\) It appears to affect both sexes equally, although there is increased incidence in pregnant women.

The onset of facial paralysis usually occurs quite rapidly, within hours, and can result in either partial or complete palsy of the facial muscles. Maximum muscle weakness is commonly reached by the third day.\(^3\)

Common symptoms of Bell’s palsy include lagophthalmos, dry and irritated eyes, facial muscle twitching, excessive tear secretion and difficulty with mouth movement. If the presentation is not accompanied by other symptoms, clinical examination can be limited to observation of the patient’s face and tests for cranial nerve VII, such as an absent or weak blink reflex.\(^1\,\text{5}\) The presence of symptoms that appear to involve more than the facial nerve (e.g., visual disturbances, hemiparesis, dysphagia) should prompt further testing. The diagnosis of Bell’s palsy is one of exclusion. Other causes of facial palsy include traumatic, infectious, neoplastic and secondary to other neurological or systematic disorders.\(^5\) It is estimated that 71% of cases of Bell’s palsy will recover completely without treatment within six months, 13% will have slight residual palsy and the remaining 16% will have more serious persistent symptoms.\(^2\,\text{5}\) Common residual symptoms include hemifacial spasm, contractures, weakness and synkinesis. This can lead to difficulty drinking, eating, speaking, and related psychosocial issues.\(^1\,\text{6}\) Cases with partial palsy and early commencement of recovery have a better prognosis. Factors that are associated with poor recovery include older age and having hypertension or diabetes.\(^1\,\text{4}\) Medical treatment usually consists of the prescription of corticosteroids for the acute condition, but has not been conclusively shown to effect the prognosis.\(^5\) There is no standard medical treatment for sequelae from Bell’s palsy and surgery may be required.\(^6\)

Patients often use complementary and alternative medical (CAM) treatments for chronic conditions such as Bell’s palsy which do not have effective conventional medical treatment. Although previous literature describes the treatment of Bell’s palsy with chiropractic and acupuncture separately, a literature search found no published research on the co-management of Bell’s palsy with these therapies.\(^3\,\text{6-11}\) There is also a lack of literature on the treatment of sequelae from Bell’s palsy with modalities other than surgery for severe cases. This case report describes the co-management of a patient with residual symptoms of Bell’s palsy by a chiropractor and an acupuncturist.

Case Presentation

A 53 year-old male presented to a chiropractor with residual symptoms of Bell’s palsy. Two years prior, he suffered excruciating pain on the back of his head while talking on a phone at work. The next day he experienced paralysis of the right side of his face. His medical physician diagnosed him with Bell’s palsy and prescribed medication. He did not recall the name of the prescription. The treatment helped his condition greatly, but some residual symptoms persisted. He did not seek any additional treatment before presenting to this clinic.
At initial presentation the patient complained of occasional slight twitching of the right eye, focal numbness with occasional twitching of the muscles of his right cheek, difficulty holding water in the mouth while drinking and occasional dripping of saliva. In addition, he complained of tenderness at the atlanto-occipital junction. His symptoms were provoked by stress and relieved by relaxation. Concurrent medical conditions included obesity, sleep apnea and hypertension. He also complained of a high level of stress from personal issues.

Examination revealed slight droopiness of the right forehead creases and eyelid. The lower lip drooped down slightly on the right side at rest, and the right side of his mouth quivered slightly upon opening. Sensation testing revealed moderate hypoesthesia at a half-inch wide circular area located one inch below his right eye.

Manual palpation of the cervical spine revealed +2/4 tenderness trigger points of the suboccipital muscles bilaterally. A spinal restriction was located at the occiput-C1 level. The diagnosis made by the chiropractor was:

1. Facial musculature weakness, quivering and numbness due to residual Bell’s palsy
2. Myofascial pain syndrome of facial and suboccipital muscles on right
3. Intervertebral segmental dysfunction of occiput and upper cervical vertebrae.

The chiropractor recommended the patient receive concurrent chiropractic and acupuncture therapy to expedite recovery from this chronic neurological condition. Acupuncture treatment commenced within a week of the patient’s presentation. Acupuncture examination of the patient revealed that the pulse was slightly slippery on the right and slightly choppy on the left. The tongue tip was purple and had a thick white greasy coat.

In Traditional Chinese Medicine (TCM) theory, the condition was diagnosed as Wind-Phlegm caused by blocks of the Yang Ming and Shao Yang meridians. Written consent was obtained from the patient for producing this case report.

**Intervention and Outcomes**

Chiropractic treatment for the patient focused on manipulation of C0-C1 using Diversified technique and soft tissue manipulation of the suboccipital and facial muscles. He was also shown daily facial expression exercises as an active therapy to perform at home. Acupuncture treatment was applied as shown in Table 1. No other TCM therapies were used.
Table 1: Acupuncture Points

<table>
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<tr>
<th>Points</th>
<th>Purpose</th>
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<tr>
<td>ST40 (Fenglong)</td>
<td>Resolve phlegm</td>
</tr>
<tr>
<td>ST 36 (Zusanli) and LI4 (Hegu)</td>
<td>Enhance Qi circulation of the face</td>
</tr>
<tr>
<td>SP 10 (Xuehai)</td>
<td>Enhance blood circulation</td>
</tr>
<tr>
<td>Du 24 (Shenting)</td>
<td>Balance Yin and Yang and calm the spirit</td>
</tr>
<tr>
<td>ST 4 (Dicang) and ST 6 (Jiache)</td>
<td>Strengthen the buccinator muscles</td>
</tr>
</tbody>
</table>

After one chiropractic and acupuncture treatment, the patient subjectively indicated decreased discrepancy of sensation between the two sides of his face and less quivering of the lower lip when opening his mouth.

The total course of treatment for the patient consisted of 11 chiropractic and seven acupuncture visits over a three-month period. The patient reported being somewhat compliant with the prescribed exercise program. At the end of this time his condition had almost completely resolved. Sensation was the same bilaterally and there was no muscle twitching. The dripping of fluids from his mouth had resolved. The drooping of the forehead, eyelid and mouth had mostly resolved.

Discussion

Patients with Bell’s palsy are most commonly treated with corticosteroid medications after diagnosis. Most cases experience a rapid resolution of their symptoms. For those who are left with residual symptoms there is no proven medical therapy. This report describes a patient who had received prior medical care but still complained of persistent symptoms of Bell’s palsy. Most of the patient’s residual complaints resolved rapidly with the application of chiropractic and acupuncture treatments.

There have been several proposed theories reported in the literature for how chiropractic manipulation of the upper cervical spine may help relieve the symptoms of Bell’s palsy. There may be physical connections between the upper cervical spine and the medulla oblongata, and joint restrictions may cause compromise of the neurological function of the cranial nerve VII nucleus. It is theorized that misaligned vertebrae may also cause spasms of the vertebral arteries, and lead to a decrease of blood-flow to the same region. Vertebral adjustments have been shown to help relax muscles, which may aid in the drainage of edema from the upper cervical/cranial area.

Physical therapy is often applied for patients with Bell’s palsy. Chronic cases of Bell’s palsy may be marked by a decrease in the number and size of muscle cells and an increase in fibrous tissue. Muscle therapy is thought to help patients regain normal function through central and peripheral mechanisms leading to neuroplasticity. Muscle reeducation and massage therapy may improve the structure of the affected muscles.
There is anecdotal evidence consisting of case reports in the literature demonstrating the effectiveness of chiropractic treatment including spinal manipulation and physiotherapy for Bell’s palsy.\(^7\)\(^9\) This report is the first to document successful acupuncture and chiropractic treatment of a patient with persistent symptoms from Bell’s palsy two years after conventional medical treatment had ended.

There is more substantial evidence for the effectiveness of physical therapy than for manipulation for Bell’s palsy including clinical trials, although more research is needed to reach a definitive conclusion for its effectiveness. Teixeira et al. conducted a systematic review of physical therapy for Bell’s palsy.\(^4\) They concluded there was low-quality evidence that tailored facial exercises can help improve facial function, particularly for chronic moderate cases. Ferreira et al. conducted a review of the literature of physical therapy for the management of acute and chronic Bell’s palsy.\(^1\) They concluded that exercise therapy was an effective treatment for both acute and chronic Bell’s palsy. Pereira et al. conducted a systematic review and meta-analysis of facial exercise therapy for Bell’s palsy, and concluded that this therapy is effective.\(^15\)

It is difficult to reconcile TCM theories on Bell’s palsy, which were developed before the function of nerves or the existence of viruses were known, with those of Western medicine. In TCM theory Bell’s palsy is associated with blocks to the flow of chi of the Yang Ming and Shao Yang meridians, which cause a syndrome labeled Wind-Phlegm. Symptoms associated with this syndrome include weakness of the facial muscles and lead to the characteristic symptoms of Bell’s palsy.\(^12\) Treatment is accomplished by the needling of specific points in these meridians to restore the flow of chi, which ideally enhances recovery from the condition.\(^12\)

There have been numerous clinical trials performed on the treatment of Bell’s palsy with acupuncture. Cumberworth et al. performed a systematic review of the literature on acupuncture treatment for Bell’s palsy.\(^10\) They concluded that although the studies reviewed showed that acupuncture appeared to be effective, the trials were of poor quality and better designed studies were necessary to come to a definitive conclusion. Kim et al. conducted a systematic review and meta-analysis of the use of acupuncture for Bell’s palsy.\(^6\) They found eight randomized clinical trials that met their inclusion criteria. All of the trials found there were significant improvements after acupuncture treatment. However, they caution that the low quality of all the trials means further studies are needed before coming to a definitive conclusion. Zhou conducted a systematic review of the literature on acupuncture for Bell’s palsy. They concluded the quality of published clinical trials was too low to come to any definitive conclusion.\(^11\)

Lee et al. performed a systematic review of integrated acupuncture and conventional western medicine treatment for Bell’s palsy.\(^16\) They found two trials which showed significant short-term benefits (1-2 weeks) for functional improvement for the integrated treatment over acupuncture alone, but no benefits beyond that time period. Both trials had small samples and unclear design quality.

**Limitations**

Possible conclusions are limited by many factors. One limitation is that there is no way to be sure the patient actually followed the active therapy instructions at home. Another is the possibility of extraneous factors which may have occurred during the course of treatment, such as stress or self-application of other types of treatments. In addition, the results could have been due to the natural history of the condition, although this is unlikely because there had not been any progress for two years.
before starting treatment at this facility. Finally, case reports illustrate only the individual case and cannot prove causation because of the lack of a comparison group.

Conclusions

This report presents the case of a 53 year-old male with chronic sequelae from Bell’s palsy who reported good results after combined chiropractic, exercise and acupuncture treatments. As there is no standard conventional medical treatment for chronic Bell’s palsy, different therapies should be investigated to resolve this condition. CAM modalities, such as chiropractic and acupuncture, are increasingly being used for conditions that are resistant to conventional medical therapy.\textsuperscript{17}

Further research is needed to determine the effectiveness of chiropractic and acupuncture therapies for Bell’s palsy, both separately and in conjunction, as the current literature is inconclusive. Well-designed randomized controlled trials should address the condition in various levels of severity and chronicity.

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References


