

Late Administration of Corticosteroids in Idiopathic Facial Nerve Palsy: A Case Report

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Abstract

Background

Bell's palsy, or idiopathic facial nerve palsy, has the best rate of improvement after corticosteroid therapy is initiated within the first seventy-two hours after symptoms onset. However, the efficacy of corticosteroids on long-standing or chronic facial nerve palsy is still unclear.

Case presentation

Here we present the case of a seventy-four-years-old female who presented to our clinic with the complaint of a four-month history of persistent left-sided facial palsy. The weakness persisted since onset despite physical therapy and supportive care with prominent facial weakness, inability of full eye closure and oral incompetency. Considering the severe ongoing functional impairment with absence of clear treatment options, a delayed course of oral corticosteroids was

initiated (prednisone 40 mg daily for seven days) with resumption of physical therapy and twelve sessions of electrical stimulation.

Clinical course and outcome

The patient had a significant improvement following the corticosteroid treatment course, with approximately around sixty percent restoration of facial motor power, eye closure and oral competency. When seen in clinics after two months, the function of her facial nerve improved from House-Brackmann grade VI (complete paralysis) to grade III (moderate dysfunction).

Conclusion

This case highlights the possible efficacy of corticosteroids, when combined with physical therapy, in promoting recovery in cases of chronic facial nerve palsy. Despite it not being a replacement of early intervention, late steroids therapy could represent a viable option for patient with persistent weakness not

responding to supportive care. Further studies are warranted to elucidate the role of corticosteroids in chronic Bells palsy.

Keywords

Bells palsy, idiopathic facial nerve palsy, corticosteroids, delayed treatment, chronic facial palsy.

Introduction

Idiopathic facial nerve palsy, otherwise known as Bell's palsy, is a common acute presentation to neurology clinics characterized by sudden or rapidly progressive unilateral facial weakness. It is well known that early treatment within the first seventy-two hours of onset with a course of corticosteroids increases recovery rates and decreases the probability of having long-term sequelae and persistent deficits. It is yet still controversial to start corticosteroid therapy beyond this time period given the minimal evidence present to support its use for chronic Bell's palsy symptoms. This case report describes a case where a delayed course of corticosteroids was initiated four months after symptoms onset, leading to significant improvement in facial paralysis, supporting the hypothesis of potential benefits of delayed treatment initiation for cases of unresolved facial nerve palsy.

Case Presentation

A seventy-four-years-old female with well controlled vascular risk factors, including hypertension, diabetes and dyslipidemia, presenting to our clinic with persistent left-sided facial palsy, with marked asymmetry, inability to fully close her eye and severe drooping. Her symptoms started acutely four months prior and have persisted without any improvement despite initial supportive measures including physical therapy.

The patient's examination revealed:

Facial symmetry: Marked asymmetry with drooping on the left side.

Eye closure: Incomplete, with exposure keratitis risk

Oral function: Incompetent, causing difficulty with eating and drinking with drooling

House-Brackmann Score: Grade VI, indicating complete paralysis

Given the severe persistent weakness and dysfunction and limitation in treatment option, a course of prednisone was initiated, forty milligrams daily for seven days, tapered over one week. Concomitantly, physical therapy was resumed with additional twelve sessions with electrical stimulation aimed to strengthen any residual facial muscle function.

Clinical course and outcomes

After around three to four weeks of initiation of corticosteroid therapy, the patient started noticing progressive improvement on facial motor power and eye closure. By the end of the first month, she reported marked improvement in her symptoms with now ability to close her eye, improved oral competency and greater ability to move her facial muscles.

At her two-month follow-up, her House-Brackmann grade improved from VI to III, denoting moderate dysfunction rather than complete paralysis, and noted sixty percent improvement overall.

Below is a table summarizing the patient's presentation at onset and throughout her follow up.

Time since onset	Clinical findings/Interventions	Treatment and Outcome
Initial (0 to four months)	Persistent left-sided facial weakness, House-Brackmann Grade VI	Supportive care and physical therapy (no improvement)
Four months	Presentation at clinic with persistent paralysis	Initiation of corticosteroid therapy and resumed physical therapy with electrical stimulation
Four months and a half (two weeks post-treatment)	Improved facial strength, partial eye closure, House-Brackmann Grade V	Ongoing physical therapy and patient-reported forty percent improvement
Six months	Significant recovery noted, House-Brackmann Grade III	Follow-up with continued improvement reaching sixty percent

Discussion

Corticosteroids are the cornerstone of idiopathic facial nerve palsy treatment, with the strongest evidence supporting initiation with seventy-two hours of symptoms onset [2]. This timeline is based on several studies [3], [4] showing that maximal benefit arises from early treatment, as corticosteroids decrease inflammation and improve neurological recovery [5]. Nevertheless, limited research has explored the therapeutic window for patients presenting beyond this timeframe or those with chronic residual symptoms.

This case adds to the sparse literature on late administration of corticosteroids, suggesting that patients with long-standing Bell's palsy may show functional recovery and symptomatic relief. The exact mechanism behind this improvement is yet unclear. One hypothesis trying to explain the exact mechanism behind this relies on the persistence of residual inflammation or immune-mediated damage in chronic cases, which will allow some degree of recovery after corticosteroids therapy.

A 2016 Cochrane review [3] confirmed the efficacy of early corticosteroid therapy in improving outcomes for idiopathic facial nerve palsy. While the main focus of this review was on early administration, it also highlighted the evidence regarding the efficacy of steroid in chronic and late-presenting cases. More

recent systematic reviews [6] still emphasize the importance of early treatment, but findings from this case along with other isolated reports [7] suggest potential benefit of delayed intervention in cases where symptoms have persisted despite implementation of early supportive care. Our case demonstrated the potential benefit of corticosteroid treatment for patients with idiopathic facial nerve paralysis even when administered several months after symptoms onset, specifically when combined with physical therapy and electrical stimulation. While this approach does not substitute early intervention, it may offer an alternative for patients with residual functional impairment unresponsive to standard care.

Conclusion

This case highlights the potential contribution of late administration of corticosteroid therapy in patients with chronic persistent facial paralysis due to Bell's palsy, specifically when initiated beyond the well-established therapeutic window, which should be explored in future studies.

Practical implications

Physicians should consider initiation of corticosteroids therapy in patients with chronic Bell's palsy who present late with persistent symptoms, since delayed administration may still offer functional benefits in

selected cases.

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