

# Recurrent Bell's Palsy

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## Introduction

Bell's palsy is the most common cause of facial paralysis worldwide. However recurrent paralysis of the facial nerve is an unusual occurrence and reported in only 7-8% of all Bell's palsy cases. We report a rare case of recurrent bilateral Bell's palsy with five episodes over a period of 12 years.

## Case Report

A 21 year old lady, native of Jammu, presented with the history of sudden onset of weakness of the left half of face of three days duration. The weakness had progressed over two days with inability to close the left eye, deviation of angle of mouth to the right and drooling of liquids from the left side of the mouth. The attack was preceded by mild pain behind the left ear which was vague and dull aching in nature. There was no history of fever, vertigo, impairment of hearing or loss of taste. There was no history of exposure to cold stress prior to the episode of facial palsy.

The patient gave a previous history of four distinct episodes of unilateral facial palsy of the right side over the past 12 years in Feb 1996, Jun 2000, March 2003 and July 2007. All the episodes lasted for 4-5 weeks and each time she was treated with oral steroids and physiotherapy. Facial recovery was complete after every episode and there was no residual facial deformity. There was no contributory family history.

General examination did not reveal any abnormality. On examination of the face, the patient had obvious asymmetry with loss of left nasolabial fold and deviation of angle of the mouth to the right. There was incomplete closure of the left eye. These findings were suggestive of Facial Nerve Palsy (Lt) Lower Motor Neuron Grade IV House Brackmann. The ENT examination and systemic examination was normal. Neurological examination, including other cranial nerves, was also normal. Her haemogram and other biochemical investigations, including blood sugar and blood urea, were normal. Immunological tests including RA factor were negative. High resolution computed tomography (HRCT) of temporal bone was normal (Fig. 1).

The patient was started on steroid (Tab Prednisolone 50 mg once daily) and acyclovir (400 mg five times a day). Physiotherapy and eye care was provided. The patient was followed up and showed good response to treatment. Steroids were gradually tapered after seven days and patient had complete recovery of facial palsy in three weeks.

## Discussion

It is estimated that 4-7% of all cases of Bell's palsy have recurrent facial palsy [1]. Bell's palsy has been classified into five categories-unilateral non recurrent, unilateral recurrent, simultaneous bilateral, alternating bilateral and recurrent bilateral. The mean recurrence interval is usually more than one year. More than two relapses in patients with Bell's palsy are less frequent and recurrences more than 4 are rare.

There is no side prevalence for recurrence of Bell's palsy. There is a lot of variation in the reports of prognosis of recurrent facial palsy. Ralli et al [2] in a study of 130 patients with Bell's palsy noted that recurrent ipsilateral attacks (i.e the unilateral recurrent palsies) showed a worse prognosis when compared with



Fig. 1 : HRCT temporal bone (axial section) showing the facial nerve

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the non-recurrent palsies. In contrast, the recurrent attacks involving the contralateral facial nerve (bilateral alternating palsies) presented a better facial recovery. Pitts et al [1] in their study of 140 patients with recurrent facial palsy observed that recurrent facial palsy did not indicate a worse prognosis for recovery regardless of which side was affected. In their series 77 patients followed up for a mean of 33 years showed no progressive facial nerve dysfunction or tumor. It has also been seen that younger the patient with Bell's palsy, higher is the probability of recurrence. Also the probability of recurrence increases with the total episode count.

The causes that predispose an individual to a recurrence of idiopathic facial palsy are not well known although associations with malignant hypertension, diabetes [3] and pregnancy have been postulated. Recurrences on the same side requires evaluation to rule out malignancy particularly schwannoma. Familial predisposition, chromosomal mutation [4] and fibrous dysplasia of temporal bone have been suggested as the etiologic factor for recurrent facial palsy. It has been suggested that a familial anatomic variation in fallopian canal accounts for recurrent attacks of facial palsy and the bony constriction of fallopian canal leads to acute recurrent attacks. An immune mediated pathogenesis of recurrent facial palsy has been proposed in some studies [5]. Navarrete et al [6] proposed that in familial cases due to autosomal inheritance there are alterations in immune system that predispose them to inflammation of the facial nerve after a viral infection. Sertac et al [5] in their study of nine patients of recurrent facial palsy found that two patients had complete and four patients had oligosymptomatic form (presence of 2 symptoms) of Melkersson Rosenthal syndrome. They proposed that the diagnosis of recurrent facial palsy may not be accurate as it may be the only prominent symptom of Melkersson Rosenthal syndrome as the other two symptoms of facial edema and fissured tongue may be obscure or overlooked. It is hence suggested that, owing to the heterogenicity of etiology, a predisposing factor for the recurrence should be looked for. In our case the etiology is idiopathic and the prognosis has been good in each episode inspite of repeated recurrences.

There is no outlined surgical protocol for management of a case of recurrent Bell's palsy. There is no cumulative data or evidence available to say that

decompression of the nerve would be effective in preventing recurrence and disfiguring facial outcome. Also whether decompression makes a difference in the ultimate facial outcome compared with what might be achieved by medical treatment is to be seen. The timing of the surgery is also important; whether it is therapeutic following the palsy or whether it is prophylactic to prevent recurrence. The route and extent of decompression for recurrent facial palsy is also controversial. Both transmastoid subtotal decompression and combined transmastoid-middle cranial fossa total decompression approach have been advocated [7]. However unfavourable results for prevention of recurrence have been reported by Dutt et al [8] in one patient who had recurrence of facial palsy following facial nerve decompression for facial palsy. In our case medical management was done since available data do not prove that surgery can prevent recurrence.

Recurrent Bell's palsy is an unusual occurrence and its aetiology has not been elucidated. The best management of the same is presently medical with advice to patient for regular follow-up.

#### Conflicts of Interest

None identified

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