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# Bell's Palsy: My Journey with a Mysterious Nerve Disorder

By Sneha Shah

**B**eing an internationally educated dentist seeking licensure in the United States is stressful. While juggling my national board exam preparations, residential visa applications, and navigating an entirely new culture in the USA, as if I didn't have enough to cope with, I began to lose control of my facial muscles as I was struck by idiopathic, unilateral facial paralysis.

Without any forewarning, one evening I noticed in the mirror that my mouth drooped to one side. Mobilizing my dental knowledge and paying closer attention, I realized that the left side of my face was looking a little odd. I had been highly stressed, and decided to go to bed, hoping I would feel better after a good night's sleep. My symptoms worsened by the morning as I had developed slurred speech, and my forehead, nasal, periorbital, and perioral muscle functions were affected. I decided to consult a physician at a nearby urgent care facility, but that doctor seemed to have limited knowledge about Bell's palsy. He focused on Lyme disease and stroke as considerations for differential diagnosis. It was my dentist who accurately

diagnosed my condition as Bell's palsy.

## What is Bell's palsy?

Bell's palsy affects the seventh cranial nerve and is a unilateral facial muscle paralysis without a known etiology. The differential diagnoses for unilateral facial muscle paralysis include brain tumor and/or stroke; however, Bell's palsy can be identified without a specific cause. Early symptoms include a slight temperature, earache, stiff neck, and weakness/stiffness of the face.<sup>1</sup>

Bell's palsy affects about 20–30 per 100,000 population.<sup>2,3</sup> It is not gender or age-specific, but its incidence seems to be highest in those in the 15-to-45-year-old age group. It affects males and females equally. Risk factors for Bell's palsy include pregnancy, preeclampsia, obesity, hypertension, diabetes, and upper respiratory ailments. There is no distinct regional variation or racial and ethnic preference. Some epidemiological data demonstrate seasonal variation, with a slightly higher incidence in cold months vs. warm months, and a slight preponderance of arid over non-arid climates.<sup>2,3</sup>

## Diagnostic evaluation

Initially, Bell's palsy may be misdiagnosed by health care providers when considering other etiologies of peripheral facial nerve palsies, such as a stroke.<sup>1</sup> A patient's dentist may be involved with diagnosis and can treat Bell's palsy in collaboration with the patient's primary care physician and medical specialists.

In researching my condition, I found an excellent reference to guide clinicians titled "Bell palsy: Clinical examination and management," published by the Cleveland Clinic.<sup>4</sup> In it I learned that clinical examination should include a complete neurologic and general examination, including otoscopy and attention to the skin and parotid gland. Vesicles or scabbing around the ear should prompt testing for herpes zoster. Careful observation during the interview while the patient is talking may reveal subtle signs of weakness and provide additional clues.

A systematic approach to the assessment of a patient with suspected Bell's palsy is recommended and outlined in the table below.

Referral to the appropriate specialist (neurologist, otolaryngologist, optometrist, ophthalmologist) is also advised if the patient has sparing of the forehead muscle, multiple cranial neuropathies, signs of infection, or persistent weakness without significant improvement at three weeks.

Treatment of Bell's palsy focuses on maximizing recovery and minimizing associated complications. Patients who cannot completely close their eyes should receive care instructions to prevent keratopathy (cornea disease.) Frequent use of lubricating eye drops with artificial tears is recommended for daytime use and ophthalmic ointment at bedtime.

The current guidelines of the American Academy of Neurology, updated in 2012, state, "For patients with new-onset Bell palsy, steroids are highly likely to be effective and should be offered to increase the probability of recovery of facial nerve function."<sup>5</sup> Surgical decompression remains controversial. Currently, there is no recommen-

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**Table One — Differential Diagnosis of Unilateral Facial Palsy<sup>4</sup>**

Differential Diagnosis	Cause	Distinguishing characteristics
<b>Central nervous system lesion</b>	Stroke, space occupying lesion	Forehead sparing, headache, limb weakness, multiple neurologic signs
<b>Autoimmune diseases</b>	Guillain-Barre syndrome Multiple sclerosis	Ascending weakness, absent reflexes Upper motor neuron signs, abnormal cerebrospinal fluid
<b>Metabolic diseases</b>	Diabetes	Elevated blood glucose
<b>Infectious diseases</b>		
Meningitis, encephalitis	Viral, bacterial, fungal pathogen	Headache, fever, meningeal signs, abnormal cerebrospinal fluid
Herpes simplex	Reactivation of herpes simplex virus type 1 from geniculate ganglion	Fever, malaise
Lyme disease	<i>Borrelia burgdorferi</i>	Rash, arthralgia, malaise, bilateral facial palsy
Ramsay Hunt syndrome	Varicella zoster	Pain, vesicular eruption
<b>Granulomatous disease</b>	Sarcoidosis	Bilateral facial palsy, elevated angiotensin-converting enzyme
<b>Neoplasm</b>	Parotid tumor, facial nerve Granulomatous disease tumor, metastasis	Insidious onset, palpable mass, partial involvement of facial nerve branches

dation for acupuncture in treating Bell's palsy.<sup>4</sup>

There is insufficient evidence to show that physical therapy has benefit — or harm — in Bell's palsy. However, some low-quality studies have indicated that facial exercises and mime therapy might improve function in patients with moderate paralysis.

In my personal experience, physical therapy benefited me a lot. I even bought an electric stimulator, and with the help of my physical therapist friend, I did it thrice a week. In my opinion, Bell's palsy patients need to consult with a neurologist, an oral medicine specialist, and an ophthalmologist.

My experience as a Bell's patient

The first day after diagnosis I was in considerable pain, and the left side of my face was heavy. My speech

problems worsened as I developed difficulty articulating certain letters like "s" and "v." I couldn't articulate certain words clearly, and my ears throbbed. Even drinking was problematic, as I could not make a seal with my lips. I couldn't eat solid food effectively and was challenged to complete simple tasks such as cooking or reading, due to my inability to manage my drooling. My ability to distinguish taste was inhibited, and I felt I could do nothing with the left side of my face.

My dentist advised me to seek consultation from a physical therapist; however, I couldn't drive to reach one because the symptoms of Bell's palsy (especially the impact on my eye) affected my ability to drive safely. Instead, I decided to rest for a week in the hope that this would resolve my symptoms. After a week of rest, I could eat again. However, another

month passed with no significant progress. At this point, my primary care provider and dentist communicated and prescribed strong steroids, which have side effects, including increased appetite, weight gain, changes in mood, and lower resistance to infection. My providers did not discuss these adverse effects with me.

Three months later, my speech improved, but my overall physical recovery was slow. I began physical therapy for 30 minutes daily. My physical activity, social life, and moods were severely affected during this period. Before the paralysis, I worked full-time as an analyst. In the evening, I volunteered at a dentist's office to broaden my experiences in the U.S. dental profession and strengthen my application to dental school. I used my weekends for intense study and kept busy during the week. With Bell's palsy and the medication's effects, I couldn't drive, and I didn't have the confidence to go to work with my crooked smile. Thus, I took a temporary medical leave. This occurred before the pandemic, when working remotely or using a mask were not options. Perhaps worse than my crooked smile, my left eye couldn't close easily and wasn't creating sufficient lubrication, so I used patches to keep it moist.

It became impossible to study and prepare for my national board exams. Even the sunshine bothered me. My mouth couldn't expand wide enough to eat; I was still on a soup diet. Finally, sleeping became difficult as I struggled to tape my eyelid closed. As a trained dentist, my understanding of the seventh cranial nerve and Bell's palsy only increased my anxiety. Reading the literature on this condition revealed many with poor long-term outcomes,<sup>6</sup> which began to affect me profoundly — my mental well-being declined as my anxiety grew.

I learned that Bell's palsy has a fair prognosis without treatment. Clini-

Table Two — Approach to Clinical Examination<sup>4</sup>

**Observe for asymmetry** during the interview; pay close attention to blinking, the nasolabial folds, and the corners of the mouth.

**General examination**, otoscopy, palpation for masses near the neck and face, and examination of the skin.

**Assess motor function**, asking the patient to:

- Raise both eyebrows
- Close both eyes tightly
- Smile
- Puff out the cheeks
- Purse the lips
- Show both upper and lower teeth (grimace)

**Assess special sensory function**, if clinically indicated

- Sensation of the face and ear
- Taste sensation of anterior two-thirds of the tongue

**Assess reflexes**

- Orbicularis reflex: tap the glabella and observe asymmetry in blink pattern
- Bell phenomenon: observe upward movement of eyes during forced eye-closure

Isolated unilateral or asymmetric facial weakness in the absence of other cranial neuropathy supports the diagnosis of Bell's palsy.

**Table Three — Recommended Medication and Dosage<sup>4</sup>**

Class of Medication	Example
Corticosteroids	Prednisolone 50 mg orally daily for 5 days Followed by 10 mg each for 5 days  Prednisolone 50 mg orally daily for 5 days
Antivirals	Valcyclovir 1 g three times daily for 7 days* Acyclovir 400 mg five times daily for 7 days*

\*Dose should be adjusted as per patients with impaired renal clearance

cally, improvement is seen in 85% of patients within three weeks, but in some cases, it may take between six months to a year. Patients who fail to show improvement within the next three to five months require more investigation, such as an MRI or CT scan. Seventy-one percent of people will experience complete recovery in facial muscle function. Some patients can develop permanent mild to severe facial muscle weakness. Incomplete recovery of facial expressions is seen to have impacted patients. The prognosis of Bell's palsy in children is generally better than in adults.<sup>4</sup>

Over the next nine months, my symptoms slowly improved until they mostly disappeared. Yet, it took several more months to smile because I had learned to cover the lower third of my face and limit the extent of my smile to prevent showing the impact of my palsy.

### Recognizing quality of life

I still have mild symptoms, and my left facial muscle is weak — I can't blow up balloons! On the paralyzed side, I became more mindful after recovering. No matter how exhausted or busy I am, I try to enjoy life's simple pleasures, like the sun on my skin and feeling the breeze. I even enjoy the snow falling and the hushed sounds of footsteps in the snow. I learned the hard way that the lack of physical and mental well-being inhib-

its every other experience in life.

Having experienced Bell's palsy first-hand, I will have a different approach to patients undergoing a hindered quality of life due to an oral health condition. I will be more thoughtful in considering the life impact of a patient's oral health complaints. As dentists, we address pain and sensitivity; in some instances, we can give a patient back their quality of life! By sharing my experience, I wish to motivate colleagues to learn more about Bell's palsy, a mysterious nerve disorder, so that they may treat patients most effectively with empathy and compassion. ●

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### About the Author

**Sneha Shah** graduated from SDM Dental College in India, earning her BDS in 2012. Following graduation, she worked for a non-profit, organizing multiple dental outreach programs in rural areas and schools. Shah received a master's degree in health care system administration from the New Jersey Institute of Technology in 2015. She has worked as an identity integrity specialist in the health information department at JFK Hospital in Edison, New Jersey. There she served as a team lead, maintaining electronic patient data. Currently, she is engaged in direct patient care as an expanded function dental assistant, and recently obtained her license to practice dental hygiene. She hopes to train to be eligible for an American dental license.



**Shah**