Trigeminal neuralgia, also known as tic douloureux, generally involves individuals over 50 years of age, especially in the sixth and seventh decades of life. This condition is found more often in females than males, in a 3:2 ratio. It is a chronic pain malady involving the trigeminal (fifth cranial) nerve and is usually evoked by a minor or trivial stimulus. This neuralgia may involve the ophthalmic (V1), the maxillary (V2), or the mandibular (V3) division and can be found to affect either individual or multiple nerve tracts. It predominantly manifests unilaterally, with only 4 percent of the population experiencing a bilateral presentation. Additionally, there appears to be no genetic link for this condition.¹ ²

The manifestation of trigeminal neuralgia is sudden, sporadic, or shock-like facial pain, lasting from as little as a few seconds to as much as two minutes, involving both physical and mental debilitation. The etiology is not completely understood, but is thought to involve a blood vessel that presses on the cranial nerve as it leaves the brainstem. Over time, the pressure causes wearing away of the myelin sheath, which protects the nerve. This may be seen during the aging process when the vessels lengthen and rest against the nerve, compressing and pulsating. Ultimately, the result is loss of the myelin covering of the nerve. Differentially, a disease process such as multiple sclerosis can cause the deterioration of the myelin sheath.

Diagnosis can be difficult because of the similarity of symptoms of other pain syndromes, such as post-herpetic neuralgia, cluster headaches, or even direct injury to the trigeminal nerve.

A careful work-up is required, involving a thorough medical history and examination, presentation of symptoms, and neurologic evaluation. Radiographic modalities can be useful to rule out tumors and disease processes, as well as be indicative of any blood vessel complications.

The symptoms of trigeminal neuralgia can vary and are usually sudden, often unilateral, and of a variable duration spanning from seconds to minutes per episode. This discomfort may ultimately be experienced for days, weeks, months, and even years. Triggering mechanisms can be as minor as a vibration, toothbrushing, or chewing. However, rarely are these symptoms experienced during sleep. Furthermore, the neuralgia has been divided into two types: Type 1 is sudden, intermittent, or stabbing, while Type 2 is constant, aching, or burning in nature.
Generally, treatment is surgery, medicine, or a combination of the two. Medically, anticonvulsants and tricyclic antidepressants are prescribed. Opioids and standard analgesics appear not to be effective for sharp recurrent pain. Unfortunately, most of these drug types have significant side effects. If pharmacological therapy proves unsuccessful, surgical options can be employed, with the understanding that they are nonreversible and can result in long-term effects of numbness and functional loss. Such options may include rhizotomy, balloon compression, glycerol injection, and microvascular decompression, among others. All therapies of this nature usually leave permanent damage. Other treatments may include acupuncture and biofeedback.

Other medical conditions and syndromes may involve trigeminal neuralgia. Parry-Romberg syndrome is one such entity. This is a rare disorder affecting predominantly females, usually involving the left side of the face where there is a slow but progressive atrophy or deterioration of the skin and soft tissues. The tissue involved is generally between the nose and upper corner of the lip (nasolabial fold), progressing to the angle of the mouth, areas around the eye, brow line, ear, and neck. Intraorally, this syndrome includes manifestations on the tongue, fleshy part of the roof of the mouth, and gums. Furthermore, trigeminal neuralgia and even seizures have been found to be associated with this syndrome.

Although the case report presented here does not follow a set pattern of specific symptoms, there are many similarities with other brain tracts, leading to this severely debilitating situation. In this instance, the clinician was obligated to attempt to find as much information about the patient and problem in order to treat and rehabilitate her.

Case Report
A 71-year-old female presented who had been diagnosed with trigeminal neuralgia in 1982 at the age of 34. These symptoms persisted, and in 1984 she underwent a left-side nerve block. The only effect of this treatment was loss of feeling to the eye. Also, symptoms developed in the temporomandibular joint (TMJ) and TMJ disc. A rib graft was done to reconstruct the TMJ and mandible. In 1987, the left trigeminal nerve was cut and symptoms improved temporarily.

Ultimately, the above procedures were not effective and symptoms returned. By 2005, the trigeminal neuralgia was compounded by ulcerating lesions and continuous unstoppable compulsive picking. A “picking syndrome” evolved with self-induced destruction of facial and intraoral anatomical form and structures. In 2009, the patient underwent a facial flap repair of the region involved, but her picking symptoms persisted with loss of the surgically repaired area. She was then referred for prosthetic rehabilitation of the oral and facial structures.

Her medical history is significant for trigeminal neuralgia with neurotrophic ulcerations, anxiety, a pacemaker, hypothyroidism, glaucoma, cataracts, and chronic obstructive pulmonary disease (COPD). Presently, her medications include famotidine, Lasix, Novolog, Flovent, Spiriva, Tilade, Ventolin, amitriptyline, Nexium, Premarin, Rhinocort, lorazepam, carbamazepine, Pilocarpine cream, oxycodone, Seroquel, fludrocortisone, sertraline, and Lyrica. She has allergies to penicillin, sulfa drugs, and latex.

On extraoral examination, she was missing her left upper lip; part of her nose, including the left nares and bridge; and her left cheek up to the infraorbital region beneath her eye. (See Figure 1.) Intraorally, the left hard palate and maxillary sinus were missing. (See Figure 2.) This was supposedly caused by the incessant picking habit precipitated by her trigeminal neuralgia. As a consequence of this extensive defect, she had nasal/extraoral regurgitation of food and liquids, unintelligible speech, and a severely compromised swallowing mechanism.

Her residual dentition was very poor. A facial prosthesis was recommended, as well as an interim obturator prosthesis. An obturator fabricated to the residual facial anatomy and the
buccal contour of the interim obturator was inserted (see Figure 3), followed by a facial prosthesis (see Figure 4), which included the upper lip, left cheek, and nose. Her facial appearance significantly improved, her speech became intelligible, the swallowing mechanism was restored, and nasal reflex of food and liquids was resolved. (See Figures 5–7.) Her husband was instructed on how to insert, place, and remove the prosthesis involved with her rehabilitation.

Discussion

This patient who developed trigeminal neuralgia 30 years ago and who underwent all conventional treatment regimens was still refractory to treatment. With the development of ulcerations, the situation became complicated with the onset of a compulsive picking syndrome. Unfortunately, this situation was not resolvable and led to extensive facial and intraoral destruction unilaterally on her left side following the innervation of V5. Ironically, while never proven, the margins of her defect describe the outline of Parry-Romberg syndrome.

Most often, the picking syndrome is characterized by repetitive picking leading to extensive damage. The patient usually focuses on a specific existing condition, such as a mole or freckle, scabs, or ulcerations, and the picking mostly occurs at some location of the face. It may even be imaginary. In this case, it appears to be precipitated by the neurologic and ulcerative process, associated with chronic discomfort. Compulsive skin picking can be a conscious response to anxiety or depression, but it is most frequently done as an unconscious habit.4 When this occurs, it is preceded by a high level of tension with a strong itch or urge and a feeling of relief or pleasure after picking. Generally, compulsive picking is treated with cognitive behavioral therapy.

In this particular case, the apparent etiology was and still is today trigeminal neurotrophic ulcerations. Understandably, depression or high anxiety is predictable with chronic trigeminal neuralgia. The associated destructive aspect makes normality and quality of life severely compromised. Surgical repair was unattainable. However, maxillofacial prosthetic facial and intraoral reconstruction provided proper oral function and restoration of appropriate anatomical facial form. These prosthetic procedures are noninvasive and completely reversible.

References