

Maria I Nunez
Professor Campbell
DEN 1112 HE13
Homework #5
Nov 21, 2022

Trigeminal Neuralgia and Bell's Palsy Condition

The Fifth cranial or trigeminal nerve is part of the nervous system that sends temperature, pain, and touch sensations to your brain. A large, three-part nerve in your head provides sensation. Motor function is present in the mandibular nerve, which aids in swallowing and chewing. The right side of the head is served by one trigeminal nerve, while the left is served by the other. There are three distinct branches on each of these nerves. The trigeminal nerve splits into three smaller branches as it leaves the brain and enters the skull, controlling facial sensations: Nerve for the eye (V1): The person's eye, upper eyelid, and forehead sensations are controlled by the first branch. Maxillary Nerve (V2): Mandibular Nerve (V3): The second branch controls sensation in the lower eyelid, cheek, nostril, upper lip, and upper gum. The third branch controls the jaw, lower lip, lower gum, and a few chewing muscles. Trigeminal neuralgia (TN), also known as tic douloureux, is sometimes referred to as the worst pain anyone has ever experienced; it is a severe, shock-like neuropathic pain that causes sudden, brief, stabbing, and recurrent pain in one or more trigeminal nerve branches. Most of the time, this pain is unilateral and is frequently sparked by subtle stimuli like touch or movement in a trigger zone. The irritation of the trigeminal nerve, which sends branches to the forehead, cheek, and lower jaw, is the cause of this intense, stabbing, electric shock-like pain. The pain can be sparked by something as simple as eating, brushing teeth, or the

wind. Trigeminal neuralgia can get worse over time if not treated, even though initial attacks may be brief and mild. (Pilitsis, J. G. (2022).

Bell's Palsy is paralysis that affects the muscles responsible for facial expressions. It is a condition that causes severe paralysis of the face. This condition damages the facial nerve, also known as the seventh cranial nerve, as evidenced by patients experiencing sudden weakness that causes the muscles on one side of the face to droop. Patients may experience a loss of taste sensation in the anterior portion of the tongue and may have difficulty smiling or expressing themselves facially. Numbness, twitching, and pain in or behind the ear may occur on the affected side of the face. Symptoms typically appear overnight and range from mild to severe, peaking within three to one week. Bell's Palsy affects 30,000 and 40,000 people of any age in the United States. (Kandray, D. P. (2018, September 12). Bell's Palsy usually occurs when the facial nerve is compressed as it travels through the fallopian canal, from the internal acoustic meatus to the stylomastoid foramen of the bone in the skull. The exact cause of the damage to the nerve is unknown. Experts say it is caused by swelling and inflammation of the nerve that controls the muscles on one side of the face.

Both Bell's palsy and trigeminal neuralgia affect facial expression and frequently have a negative impact on oral health and a patient's daily routine, making it difficult for them to eat, taste, swallow, brush their teeth, and smile.: The muscles that allow for facial expression are controlled by the facial nerve, while the trigeminal nerve is the face's sensory nerve. The main difference is that most people with Bell's palsy will fully recover in one to two weeks, without treatment. Xerostomia, a condition in which the salivary glands do not produce enough saliva to keep your mouth moist, is another oral health issue that Bell's palsy patients have.

As a future dental hygienist, I need to be able to look for some abnormalities and dental issues related to trigeminal neuralgia. In the dental setting, there are no specific ways to diagnose TN; however, temporomandibular joint and tooth radiographs can help eliminate other causes of pain. A comprehensive intraoral examination of the dentition, oral cavity, oropharynx, salivary glands, and associated oral structures should be carried out to rule out any additional conditions. The most common trigger zones are the nasolabial region, upper and lower lip, chin, cheek, and alveolar gingiva. The dental hygienist plays a role in this because the pain is frequently linked to triggers in small sensory zones like touching or washing the face, speaking, eating, drinking, chewing, the wind blowing on the face, and brushing the teeth. Due to the severe pain, patients may avoid dental care, increasing their risk of developing periodontal or various diseases, I will make every effort to make my patients as comfortable as possible, provide a variety of treatment options, and assist them in modifying their oral hygiene routines or locating strategies for avoiding oral issues.

Also, as a future dental hygienist, if I have a Bell's palsy patient, I will check to see if they have xerostomia, which slows down the flow of saliva and increases the risk of dental caries. I will help them deal with the symptoms and provide them with various products that can help them make oil and remove minerals from tooth surfaces by improving their spit's ability to buffer. I recommend using fluoride stain or local fluoride treatments due to this population's increased caries risk. Oral hygiene instructions similar between TN and BP is that depending on the patient's preference for texture, soft picks, tufted floss, or rubber tip stimulators can be used as interdental floss. Daily use of an antiseptic or fluoride-containing alcohol-free mouthwash is recommended to eliminate the bacteria that cause gingivitis and caries. Fluoride can also be given daily in specialized trays if the patient is at a high or extreme risk of caries. However, a dental hygienist

can give a different oral recommendation to a patient with trigeminal Neuralgia using an extra-soft manual or power toothbrush. Patients with trigeminal Neuralgia may exert better control with a power toothbrush and can avoid rapid movement daily with a manual brush. Patients with Bell's palsy condition may be unable to chew food due to the loss of muscle tone on the affected side. Due to the impaired buccinator muscle, which usually assists in moving food onto the occlusal plane, food can also become trapped in the vestibule of the cheek. Dental biofilm accumulation may rise as a result. Consequently, dental hygienists should emphasize the importance of rinsing with water after eating to remove food particles that might be stuck in the vestibule.

An infection of the skin called angular cheilitis causes lesions on the sides of the mouth. The Greek words *chiel*, which means lips, and *itis*, which means inflammation, are the source of the name. Angular cheilitis causes a lesion to form at the mouth's corners. The following signs and symptoms can occur at the corners of the mouth: moist, crusting, itchiness, pain, soreness at the site, and open, red, ulcerated skin. The underlying cause determines angular cheilitis treatments. Your doctor will often try to identify the possible causes of the condition and treat the root of the problem. For instance, they might prescribe an antifungal medication if they think a *Candida* infection causes the lesions. Angular cheilitis will likely return if you do not take all the medication. Additionally, angular cheilitis-related discomfort may be alleviated by topical treatments. Applying lip balm or petroleum jelly to the lesions is one example. These decrease dryness and further develop in water maintenance. (Nall, R. (2021, July 1).

In conclusion, dental hygienists should be able to recognize TN and Bell's palsy symptoms to improve patient outcomes. The dental hygienist should notify the dentist of the presence of the symptoms and initiate the necessary medical referrals once they have been identified.

Reference

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