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Trigeminal Neuralgia and Bell's Palsy

Trigeminal neuralgia, also known as tic douloureux, is a severe, shock-like neuropathic pain that causes sudden, brief, stabbing, and recurrent pain in one or more trigeminal nerve branches.This aggravation is normally set off by light catalyst in a trigger zone, like touch or movement. It typically manifests as sharp pain along the nerve path that lasts for a few seconds to several minutes. Multiple sclerosis or a tumor that compresses the associated trigeminal nerve is present in some trigeminal neuralgia patients. Each year, 12 people in every 100,000 are affected by trigeminal neuralgia , with women being more at risk than men. Most cases occur between the ages of 50 and 70 (McKinney,2021). Trigeminal neuralgia is associated with the 5th cranial nerve known as the trigeminal nerve.

The condition known as Bell's palsy is named after the 19th-century anatomist Charles Bell. This is an acute facial paralysis which causes sudden weakness on one side of the face, resulting in muscle droop and damage to the facial nerve, also known as the 7th cranial nerve. In the United States, Bell's palsy affects between 30,000 and 40,000 people and can affect people of any ages (Kandray,2014).

The dental manifestations and conditions that Bell palsy and trigeminal neuralgia share is that they greatly deteriorate the quality of life of those who have it. It affects the head region and things that are done as a common part of life such as speaking, eating, and taking care of one's teeth at home become more challenging. There are also many differences in dental

manifestations and conditions associated with Bell palsy and trigeminal neuralgia. Nerve damage from Bell's palsy can cause excessive or decreased salivation and tear production. The reduced activity in the salivary glands lead to dry mouth which is known as Xerostomia. Patients who suffer from Xerostomia have a higher likelihood of developing caries. Due to weakened buccinator muscles, which normally move food into the occlusal plane, patients with Bell's palsy will have more food stuck in their cheeks' vestibule.The patient's ability to chew food can be affected by muscle tone loss. Patients must brush and floss more frequently as more dental biofilm accumulates as a result of more food particles being trapped. To flush out the biofilm and food particles, it is also recommended that the patient use a dental aid like a waterpik. With or without treatment, the majority of Bell's palsy patients will completely recover within one to two months. A small percentage of those affected will develop permanent muscle weakness (Kandray,2014). The majority of Bell's palsy patients are able to resume their normal lives. According to "Detecting Trigeminal Neuralgia in the Dental Setting", medical management, pharmacologic treatment, radiosurgery, microvascular decompression, percutaneous trigeminal ganglion techniques, and medical management, on the other hand, are all options for treating trigeminal neuralgia. Most of the treatment pertains to management rather than a cure.

Hygienists are typically the first ones to encounter the patient. It is important that the hygienist conduct an extraoral and intraoral exam on each patient. This allows the hygienist to detect any abnormalities in the salivary glands, lymph nodes and general appearance of the patients. In the case of Bell's palsy, a hygienist can typically identify signs by observing the patient's facial drooping and difficulty closing one eye. There are no specific methods for diagnosing trigeminal neuralgia in the dental setting. However, radiographs of the temporomandibular joint and teeth can be used to rule out any other causes of pain

(McKinney,2021). For both Bell's palsy and trigeminal neuralgia, hygienists can refer patients out to the appropriate specialist for diagnosis.

The patient's oral health is impacted by both diseases.Using special mouth rinses to reduce the bacteria that are associated with caries and interdental aids to remove debris between teeth are oral care instructions that will be beneficial to both Bell's palsy patients and trigeminal neuralgia patients. Patients with trigeminal neuralgia will experience pain in the head and face region. It is suggested that they purchase an electric toothbrush in order to slow down or reduce the movements involved in manual toothbrushing.When the pain is unbearable, instead of brushing, patients should use soft gauze or foam soaked in chlorhexidine to remove any biofilm from their teeth (McKinney,2021). Bell's palsy patients are instructed to rinse their mouths with water following each meal to remove excess food from the cheek vestibules. Utilizing products with fluoride, calcium phosphate, antimicrobials, sodium bicarbonate, and xylitol will also greatly benefit patients. These products will assist in lubrication, remineralization, and mineral loss prevention (Kandray,2014).

Patients with Bell's palsy may develop angular cheilitis because it is difficult for them to fully close their mouths due to facial paralysis. As a result of extremely dry skin caused by drooling and saliva collection in the corner of the mouth, cracks and blisters will form and act as an entry way for bacteria and fungi, leading to inflammation and infection. Other than blisters and cracks, other symptoms include; maceration, swelling, and crusting. The treatment option for angular cheilitis as a result of bacteria is to take antibiotics both orally or topically to treat the bacterial infection. If it is a result of a fungal infection then ointments and creams such as antifungal creams or topical steroids will help alleviate the pain and swelling. Petroleum jelly or

lip balm are two other products that can help protect and moisturize your mouth (Cleveland clinic).

References

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