

Microvascular decompression for Primary Hemifacial Spasm

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Hemifacial spasm is a disorder of the nervous system which involuntarily twitches the muscles on one side of your face. Hemifacial spasm is most often caused by a blood vessel that crosses a facial nerve, but may be caused by an injury to the facial nerve or a tumor, or may not have a cause. Hemifacial spasms may occur in men or women but are most common in women over 40. They're even more likely to occur on the left side of your nose. Hemifacial spasms are not in themselves harmful. But a repetitive twitch in your face can be painful or irritating. Such spasms can restrict function in extreme cases due to involuntary closing of the eye or the effect they have on voice. In certain cases such spasms can mean that your facial structure has an underlying disorder or an abnormality. Either trigger can compress or injure your nerves, and twitch your facial muscles. Hemifacial spasm is a rare disease characterized by involuntary muscle contractions in one side of the face; it has an incidence of less than 1 in 100,000 people. It consists of a progressive, spontaneous and intermittent appearance of contractions of the muscles involved in facial expression. Hemifacial spasms are often caused by irritation or facial nerve damage. These are usually caused by a blood vessel pressing on the facial nerve near where the brain stem is attached to the nerve. When this happens, the facial nerve will function alone, sending out nerve signals this trigger twitching of the muscles. This is known as an ephaptic transmission, and it's one of the main causes of these spasms. The injury to the head or face may also cause hemifacial spasms due to facial nerve damage or compression. Hemifacial spasm has a major psychological and cosmetic effect in patients; can also impair vision in advanced cases. In our experience, primary hemifacial spasm is a disease that usually begins between 41 and 60 years with an average of 50 years.

Moreover, varying series of literature indicate that the age of appearance can vary from 18 to 77 years. Most patients are female with 2.4 female incidences over male. The left hand is the most impacted hand of the nose. It has been suggested that the predominance of the left side may be due to a predisposition of the embryological position in relation to the facial nerve compression and the compressed vessel in the entry zone of the nerve on the left side. The nerve compression at the brainstem is almost always seen on magnetic resonance imaging (MRI). Bilateral hemifacial spasm is very rare.

The definitive treatment is Microvascular Decompression (MVD) of the facial nerve in the cerebello-pontine angle, which cures the disease in 80 to 90% of patients. Microvascular decompression (MVD) is an operation which relieves abnormal cranial nerve compression causing trigeminal neuralgia, glossopharyngeal neuralgia, or hemifacial spasm. MVD involves opening the skull (craniotomy) and inserting a sponge that causes pain signals between the nerve and the offending artery. Microvascular decompression is an invasive process, and although safe in expert hands, it has possible hazards that are rare / infrequent, including: infection. Spinal fluid leakage from hearing loss, facial numbness and/or facial fatigue (usually acute, sometimes permanent). Surgery involves opening the skull (craniotomy) and exposing the nerve to insert a tiny sponge between the compressing vessel and the nerve at the base of the brainstem. The sponge isolates the nerve from the blood vessel's pulsating effect and pressure. Trigeminal neuralgia is a fifth cranial nerve inflammation that causes extreme pain that generally affects one side of the neck, primarily in forehead, cheek, jaw, or teeth. To treat trigeminal neuralgia, a sponge is placed between the trigeminal nerve and the superior cerebellar artery or a branch of the petrosal vein. By removing the compression, the painful symptoms are relieved.