

Bell's palsy

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Abstract

Bell's palsy or idiopathic facial paralysis is the most common cause of unilateral facial paralysis. It has specific and important symptoms. Its cause is unknown but may be associated with other diseases. This report will discuss the possible causes, symptoms, diagnosis, and the treatment of Bell's palsy.

Introduction

Bell's palsy is a form of temporary facial paralysis resulting from damage or trauma to the facial nerves. The facial nerve—also called the 7th cranial nerve—travels through a narrow, bony canal (called the Fallopian canal) in the skull, beneath the ear, to the muscles on each side of the face. For most of its journey, the nerve is encased in this bony shell. Each facial nerve directs the muscles on one side of the face, including those that control eye blinking and closing, and facial expressions such as smiling and frowning. Additionally, the facial nerve carries nerve impulses to the lacrimal or tear glands, the salivary glands, and the muscles of a small bone in the middle of the ear—called the stapes. The facial nerve also transmits taste sensations from the tongue. When Bell's palsy occurs, the function of the facial nerve is disrupted, causing an interruption in the messages the brain sends to the facial muscles. This interruption results in facial weakness or paralysis. The disorder, which is not related to stroke, is the most common cause of facial paralysis. Generally, Bell's palsy affects only one of the paired facial nerves and one side of the face, however, in rare cases, it can affect both sides. It affects men and women equally and can occur at any age, but it is less common before age 15 or after age 60. It disproportionately attacks people who have diabetes or upper respiratory ailments such as the flu or a cold⁽¹⁾.

Discussion :

Bell's palsy occurs when the nerve that controls the facial muscles is swollen, inflamed, or compressed, resulting in facial weakness or paralysis. Exactly what causes this damage, however, is unknown. Most scientists believe that a viral infection causes the disorder. Such as :

- Herpes simplex, which causes cold sores and genital herpes.
- HIV, which damages the immune system.
- Herpes zoster virus, which causes chickenpox and shingles.
- Epstein-Barr virus, which causes mononucleosis.
- Rubella virus, which causes German measles
- influenza B virus, which causes Flu.
- Coxsackie virus, which causes hand-foot-and-mouth disease.

They believe that the facial nerve swells and becomes inflamed in reaction to the infection, causing pressure within the Fallopian canal and leading to ischemia (the restriction of blood and oxygen to the nerve cells). In some mild cases (where recovery is rapid), there is damage only to the myelin sheath of the nerve. The myelin sheath is the fatty covering—which acts as an insulator—on nerve fibers in the brain. The disorder has also been associated with influenza or a flu-like illness, headaches, chronic middle

ear infection, high blood pressure, diabetes, sarcoidosis, tumors, Lyme disease, and trauma such as skull fracture or facial injury⁽¹⁾.

Symptoms:

The facial nerves control blinking, opening and closing of the eyes, smiling, salivation, lacrimation (production of tears), and frowning. They also connect with the muscles of the stapes, a bone in the ear involved in hearing.

When the facial nerve malfunctions, as in Bell's palsy, the following symptoms can occur :

- sudden paralysis/weakness in one side of the face.
- difficulty closing one of the eyelids.
- irritation in the eye because it does not blink and becomes too dry.
- changes in the amount of tears the eye produces.
- drooping in parts of the face, such as one side of the mouth.
- drooling from one side of the mouth.
- difficulty with facial expressions.
- sense of taste may become altered.
- an affected ear may cause sensitivity to sound.
- pain in front or behind the ear on the affected side.
- Headache⁽²⁾.

Diagnoses :

The diagnosis of Bell's palsy is a diagnosis made by exclusion (that is, by ruling out other possible causes). A doctor will carry out a neurological examination. He/she will ask you to perform a range of facial movements, such as closing your eye, puckering your lips, raising your eyebrows and smiling. A diagnosis of Bell's palsy is likely if you have rapidly lost the ability to move the affected side of your face at all, or your facial movement is severely impaired and you have no other symptoms or signs. To eliminate any other potential causes, your doctor may also request that you undergo:

- Blood tests to rule out other potential causes, such as Lyme disease and Ramsay Hunt syndrome.
- Imaging, such as magnetic resonance imaging (MRI) and computerized tomography (CT scan), to rule out other potential causes such as tumours.
- Tests with an Ear, Nose and Throat (ENT) specialist.
- A nerve test called electromyography (EMG) may be requested sometime after the onset of facial paralysis to identify if the facial nerve has been damaged, and if so, how much damage has taken place. It is not a diagnostic test but gives useful information about how the facial nerve is working. Find out more about medical tests⁽²⁾.

Treatment

Bell's palsy affects each individual differently. Some cases are mild and do not require treatment as the symptoms usually subside on their own within 2 weeks. For others, treatment may include medications and other therapeutic options. If an obvious source is found to cause Bell's palsy (e.g., infection), directed treatment can

Recent studies have shown that steroids such as the steroid prednisone - be beneficial. - used to reduce inflammation and swelling --are effective in treating Bell's palsy. Other drugs such as acyclovir -- used to fight viral herpes infections -- may also have some benefit in shortening the course of the disease. Analgesics such as aspirin, acetaminophen, or ibuprofen may relieve pain. Because of possible drug interactions, individuals taking prescription medicines should always talk to their doctors before taking any over-the-counter drugs. Another important factor in treatment is eye protection. Bell's palsy can interrupt the eyelid's natural blinking ability, leaving the eye exposed to irritation and drying. Therefore, keeping the eye moist and protecting the eye from debris and injury, especially at night, is important. Lubricating eye drops, such as artificial tears or eye ointments or gels, and eye patches are also effective. Other therapies such as physical therapy, facial massage or acupuncture may provide a potential small improvement in facial nerve function and pain. In general, decompression surgery for Bell's palsy to relieve pressure on the nerve is controversial and is seldom recommended. On rare occasions, cosmetic or reconstructive surgery may be needed to reduce deformities and correct some damage such as an eyelid that will not fully close or a crooked smile⁽¹⁾⁽²⁾.

Conclusions :

Bell's palsy is the most common cause of facial paralysis. It usually affects just one side of the face. Symptoms appear suddenly, and it occurs at any age. The exact cause is unknown, but it may be a reaction that occurs after a viral infection. Diagnosing Bell's palsy is often a process of elimination. Most people with Bell's palsy recover completely with variable period about 2 weeks to 6 months .

References :

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