

Bell's Palsy

About 40,000 people in the United States develop facial paralysis each year with children comprising a small percentage of that population. There are more than 50 known causes of facial paralysis but the most common in children is "Bell's palsy," the cause of which is not certain. This disorder affects one side of the facial muscles due to dysfunction of the seventh cranial nerve, usually thought to stem from a viral infection; Bell's palsy is found in 20 out of 100,000 Americans, with the incidence increasing with each decade of life.

What causes Bell's palsy?

In Bell's palsy, facial paralysis results from damage (e.g., possibly from viral infection) to the facial nerve. Adults and children will either wake up to find they have facial paralysis or palsy, or have symptoms such as a dry eye or tingling around their lips that progress to Bell's palsy during that same day. Occasionally symptoms may take a few days to progress to facial weakness or paralysis. Physical trauma to the head and neck region at birth and during childhood may cause facial paralysis. Other causes are:

- Chicken pox: Chicken pox and shingles are both caused by a single virus of the herpes family known as varicella-zoster virus (VZV). Varicella is the primary infection that causes chickenpox; Herpes zoster is the reactivation of the virus that causes shingles. Research studies suggest that Bell's palsy may be due to a reactivation of herpes simplex virus (HSV). Between 75 percent and 90 percent of chickenpox cases occur in children under 10 years of age. According to a 2001 study, about 10

percent of children between ages five and nine and about two percent of 10 to 14 year olds get chicken pox each year.

- Infectious mononucleosis: This condition, with a peak incidence in the 15- 17 age group, can be caused by several different viruses. The leading causes are the Epstein-Barr virus and cytomegalovirus, both members of the herpes virus family. The infection is transmitted by saliva, sexual contact, respiratory droplets, and blood transfusions.
- Lyme disease: Lyme disease is an infection that's spread by Ixodes ticks (black-legged or deer ticks in the eastern United States, and western black-legged ticks in the west). The second stage of Lyme disease usually appears two to three months after the tick bite, and may include facial palsy or paralysis among other symptoms.

What are the symptoms of Bell's palsy in children?

Not all children react the same to this disorder. However, recorded symptoms include:

- The child may complain of headache or pain behind or in front of the ear a few days prior to the onset of Bell's palsy.
- Swelling or drooping on one side of the face.
- Drooling, excessive, or reduced production of saliva.
- An inability to blink or completely close one eye.
- The child has either excessive tears or marked dryness and inability to make tears in one eye.
- Sounds seem louder than they really are.
- The child is experiencing sensitivity to light.
- Episodes of dizziness.

Treatments for Facial Paralysis:

If infection is the cause, then an antibiotic to fight bacteria (as in middle ear infections) or antiviral agents (to fight syndromes caused by viruses like herpes zoster (Ramsay Hunt Syndrome) may be used. The prognosis for children with facial paralysis is generally very good. The extent of nerve damage determines the extent of recovery. With or without treatment, studies indicate that most pediatric patients with the disorder begin to get better within two weeks after the initial onset of symptoms and recover completely within three to six months. Adults may find residual symptoms remaining for an indefinite period of time.

What happens during the diagnosis?

After an examination, the otolaryngologist- head and neck surgeon may conduct a hearing test to determine if the cause of damage to the nerve has involved the hearing nerve, inner ear, or delicate hearing mechanism. Additional tests in the physician's office include a balance test and a tear test, to measure the eye's ability to produce tears. Eye drops may be necessary to prevent drying of the surface of the eye cornea. In some circumstances, the physician may recommend a CT (computerized tomography) or MRI (magnetic resonance imaging) test to determine if there is infection, tumor, bone fracture, or other abnormality in the area of the facial nerve. An additional diagnostic tool is the Electro neuronography (ENOG), which stimulates the facial nerve to assess how badly the nerve is damaged. This test may have to be repeated at frequent intervals to see if the disease is progressing.

Sources:

National Institute of Neurological Disorders and Stroke

Bell's Palsy Research Foundation