

Facial Nerve Paresis/Paralysis

Basics

OVERVIEW

- Dysfunction of the facial nerve (nerve VII) causing weakness or paralysis of the muscles of the face, including ears, eyelids, lips and nostrils

SIGNALMENT/DESCRIPTION OF PET

Species

- Dogs
- Cats

Breed Predispositions

- Paralysis of unknown cause (so-called “idiopathic paralysis”)—Cocker spaniel, Beagle, Pembroke Welsh corgi, Boxer, English setter, golden retriever, and domestic longhair cats

Mean Age and Range

- Adults

SIGNS/OBSERVED CHANGES IN THE PET

- Messy eating; food left around mouth
- Excessive drooling or food falling from the mouth on the affected side
- Lack of symmetry of the face, may progress to both sides over weeks to months; rarely present on both sides at initial presentation, if both sides affected may have system-wide disease
- Eye—inability to close the eyelids; may have discharge containing mucus and/or pus; may have inflammation of the moist lining of the eye (known as “conjunctivitis”) or inflammation of the cornea (known as “keratitis”)
- Drooping of the ear and lip on the same side of the head
- Drooping of the ear is not always evident in dogs with erect ears and in cats
- Collapse of the nostril
- Decreased or absent reflexes of the eyes and eyelids (menace response and palpebral reflex); unable to fully close eyelids; reduced tear production; discharge and dry eye ulcers (known as “keratoconjunctivitis sicca”)
- Long-term (chronic) facial nerve paresis/paralysis—pet may have deviation of the face toward the affected side due to scarring of the muscles of the face (known as “muscle fibrosis”)
- Spasms may be observed infrequently in half of the face (known as “hemifacial spasms” or “facial nerve tetanus”); these pets have a “grinning” appearance to one side of the face—at times the face will appear normal, only to begin “grinning” appearance again secondary to middle ear problems or brain lesions



- When secondary to brainstem disease—altered mentation (such as drowsiness or sleepiness [known as “somnolence”] or stupor); other cranial nerve and gait abnormalities may be noted

CAUSES

One-Sided (Unilateral) Peripheral (outside the central nervous system) Facial Nerve Weakness or Paralysis

- Unknown cause (so-called “idiopathic disease”)
- Metabolic disease—inadequate levels of thyroid hormone (known as “hypothyroidism”)
- Inflammatory disease—inflammation of the middle ear or inner ear (known as “otitis media-interna”) in dogs and cats; inflammatory masses that develop from the middle ear or eustachian tube (known as “nasopharyngeal polyps”) in cats; nerve inflammation (known as “neuritis”)
- Tumors or cancer (squamous cell carcinoma, aural cholesteatoma)
- Trauma—fracture of the skull near the ear; injury to the facial nerve as it leaves the skull near the ear
- Iatrogenic—secondary to surgical removal of the external ear canal, exuberant ear cleaning; adverse reaction to medications containing potentiated sulfonamides (a type of antibiotics)—in certain dogs
- Toxic disorder—tick bite paralysis

Two-Sided (Bilateral) Peripheral Facial Nerve Weakness or Paralysis

- Unknown cause (so-called “idiopathic disease”)—rare
- Inflammatory and immune-mediated disease—inflammation of several nerve roots and nerves (known as “polyradiculoneuritis”), including coonhound paralysis; diseases involving a number of nerves (known as “polyneuropathies”), myasthenia gravis (a disorder of neuromuscular transmission characterized by muscular weakness and excessive fatigue)
- Metabolic disorder—disease involving multiple nerves related to the presence of cancer somewhere in the body (known as “paraneoplastic polyneuropathy”), as seen in pancreatic cancer
- Toxic disorder—botulism

Central Nervous System Problems That Lead to Facial Nerve Weakness or Paralysis

- Most are one-sided (unilateral) facial nerve weakness (paresis) or paralysis
- Infectious—viral, bacterial, fungal, rickettsial, protozoal
- Inflammatory disease—brain and spinal cord and the membranes covering them [known as “meninges”] characterized by nodular, inflammatory lesions [known as “granulomatous meningoencephalomyelitis”]
- Tumor or cancer—primary brain tumor (meningioma, choroid plexus tumor); cancer that has spread to the brain (known as “metastatic cancer”) such as hemangiosarcoma, carcinoma, lymphoma

RISK FACTORS

- Long-term (chronic) inflammation of the outer ear (known as “otitis externa”) and inflammation of the middle ear (known as “otitis media”)

Treatment

HEALTH CARE

- Outpatient—facial paralysis of unknown cause (idiopathic facial paralysis)
- Inpatient—initial medical work up and management of generalized (systemic) or central nervous system disease, if present

DIET

- No change required

SURGERY

- Surgery may be indicated in some cases of inflammation of the middle ear (otitis media) to drain the middle ear (procedure known as “bulla osteotomy”)—in pets with disorders of the middle ear
- Surgery may be necessary to remove inflammatory masses that develop from the middle ear or eustachian tube (nasopharyngeal polyps) in cats

Medications

Medications presented in this section are intended to provide general information about possible treatment. The treatment for a particular condition may evolve as medical advances are made; therefore, the medications should not be considered as all inclusive

- Treat specific disease, if possible (thyroid hormone for hypothyroidism for example)
- Facial weakness (paresis) or paralysis of unknown cause (idiopathic disease)—no treatment required; effectiveness of steroids in treatment is unknown, although used very commonly in people to treat Bell's palsy
- Tear replacement with artificial tears—if Schirmer tear test (technique to measure watery portion of tears) value is low; if the pet has eyelid(s) turned outward, away from the eyeball (known as “ectropion”) or protrusion of the eyeball (known as “exophthalmos”)

Follow-Up Care

PATIENT MONITORING

- Reevaluate early for evidence of superficial loss of tissue on the surface of the cornea (the clear outer layer of the front of the eye), frequently with inflammation (known as a “corneal ulcer”)
- Assess monthly for 2–3 months for reflexes of the eye and eyelids (menace response, palpebral reflex) and lip and ear movements to evaluate return of function and condition of affected eye, although damage usually is permanent, as well as monitoring for other nervous system signs that may indicate progressive disease

POSSIBLE COMPLICATIONS

- Dry eye (known as “keratoconjunctivitis sicca” or KCS)
- Superficial loss of tissue on the surface of the cornea (the clear outer layer of the front of the eye), frequently with inflammation (corneal ulcers)
- Severe deviation of the face toward the affected side due to scarring of the muscles of the face; deviation of the lips may develop
- Permanent lack of facial symmetry

EXPECTED COURSE AND PROGNOSIS

- Depends on underlying cause, if one is present
- Facial nerve weakness (paresis) or paralysis of unknown cause (idiopathic disease)—prognosis guarded for full recovery
- Improvement may take weeks or months or may never occur
- Lips may permanently contract
- Eye ulcers may develop complications

Key Points

- Clinical signs may be permanent
- The other side of the face can become affected
- Eye care: the cornea on the affected side may need application of artificial tears; extra care may be needed if the pet is a breed with naturally protruding eyes (exophthalmos); check regularly for redness, discharge, or pain
- Most pets tolerate this nerve deficit well; facial nerve weakness (paresis) or paralysis has no significant impact on quality of life