Lake Shore Pet Hospital

Wobbler Syndrome

(Cervical Spondylomyelopathy)

Basics

OVERVIEW

- "Wobbler syndrome" (also known as "cervical spondylomyelopathy") is a disease of the neck (cervical spine) of large- and giant-breed dogs
- Wobbler syndrome is characterized by compression of the spinal cord and/or nerve roots, which leads to nervous system deficits and/or neck pain
- The spine is composed of multiple bones with disks (intervertebral disks) located in between adjacent bones (vertebrae); the disks act as shock absorbers and allow movement of the spine; the vertebrae are named according to their location—cervical vertebrae are located in the neck and are numbered as cervical vertebrae one through seven or C1–C7

GENETICS

- Genetic basis proposed for the Borzoi and Basset hound
- Recent evidence suggests that inheritance of wobbler syndrome in Doberman pinschers is due to an autosomal dominant trait, with incomplete penetrance

SIGNALMENT/DESCRIPTION OF PET

Species

- Dogs

Breed Predilections

- Doberman pinschers are affected most commonly, with 50% of the cases seen in this breed
- Other breeds with a high incidence of wobbler syndrome include the Great Dane, rottweiler, Weimaraner, and Dalmatian
- Wobbler syndrome may be seen in any canine breed, including small-breed dogs

Mean Age and Range

- Doberman pinschers and other large-breed dogs usually are presented to the veterinarian for clinical signs when they are over 3 years of age, with a mean age of 6 years
- Giant-breed dogs usually are presented when they are less than 3 years of age, although signs can develop later in life
- Young giant- or large-breed dogs tend to present with vertebral malformation and compression while older dogs tend to have disc-associated compression

Predominant Sex

- Males are slightly more likely to have wobbler syndrome than are females, particularly in giant-breed dogs

SIGNS/OBSERVED CHANGES IN THE PET

- The classic clinical presentation is a slowly progressive long-term (chronic), wobbly, uncoordinated or

"drunken"-appearing gait or movement (known as "ataxia") of the rear legs, with weakness (known as "paresis") ,with less severe involvement of the front legs when the lesion is around the 5th to 7th cervical vertebrae
- Sudden (acute) neck pain reported (known as "cervical hyperesthesia"); seen in 65-70% of Doberman pinschers, and in 40-50% of other breeds
- If in the mid neck, all four limbs may be ataxic
- Front leg gait can appear to be shortened in stride, spastic, with a floating appearance, or very weak
- Dogs may be unable to walk (known as being "non-ambulatory")
- Loss of muscle mass of the shoulder (known as "supraspinatus muscle atrophy") and worn toenails can be seen in some pets
- Worn toenails
- Increased muscle tone for extensor muscles in all limbs, with normal to increased knee jerk reflex (known as "patellar reflex")

CAUSES

- Nutrition—excess protein, calcium and caloric intake were proposed as causes in Great Danes; nutrition does not appear to play a role in the development of wobbler syndrome in large-breed dogs
- Multiple factors likely are involved in the cause of wobbler syndrome

RISK FACTORS

- Body conformation—large head and long neck were proposed as risk factors, but later studies found no correlation between body dimensions and wobbler syndrome
- Fast growth rate has been proposed but not confirmed

Treatment

HEALTH CARE

- Inpatient, if surgical treatment is elected
- Outpatient, if medical management is chosen as the treatment
- Dogs that cannot walk (non-ambulatory dogs)—keep pets on soft bedding and turn every 4 hours to avoid "bed sores" (known as "decubital ulcers"); empty the bladder as needed, on a routine schedule; physiotherapy is essential to avoid loss of muscle mass (muscle atrophy) and stiffening of the joints (known as "ankylosis"), and to hasten recovery

ACTIVITY

- Medically treated dogs should have restricted activity for at least 2 months
- Restriction of activity is important for the first 2 or 3 months following surgery to allow fusing of the backbones (vertebrae) at the site of surgery

DIET

- Avoid excess protein, calcium or caloric intake in giant-breed dogs with bone compression

SURGERY

- Various surgical procedures have been performed in treating wobbler syndrome, cervical disc arthroplasty is a novel technique that appears to be as effective as other traditional procedures; can be used for multiple decompressions
- Recurrence rate is approximately 20% with any surgical technique

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

- Steroids—prednisone or dexamethasone initially; followed by a gradually decreasing dose and frequency, as directed by your pet's veterinarian
- Aspirin-type drugs (NSAIDs) such as meloxicam may be used for very mild cases of ataxia and neck sensitivity
- Gabapentin can be used for pain as needed, this will not be combined with steroids

Follow-Up Care

PATIENT MONITORING

- Repeat the nervous system evaluation as often as needed to monitor response to treatment

PREVENTIONS AND AVOIDANCE

- Excessive activity, jumping, and running should be avoided
- Avoid use of collars placed around the neck; use a body harness

POSSIBLE COMPLICATIONS

- Side effects from steroids possible including ulcers; a medicine such as omeprazole may be used to minimize risks
- Infection of the urinary tract (cystitis)
- Recurrence of clinical signs can occur in dogs treated medically or surgically

EXPECTED COURSE AND PROGNOSIS

- Approximately 80% of pets improve with surgery
- Approximately 50% of pets improve with medical treatment (restricted activity with or without steroids) and 25% remain stable

Key Points

- Surgery offers the best chance of improvement (approximately 80%), but risk of significant complications is associated with surgical procedures of the neck (cervical spine)
- Doberman pinschers may have concurrent conditions such as clotting disorders (e.g., von Willebrands's), underactive thyroid (known as hypothyroidism) or heart disease (known as "dilated cardiomyopathy") that can affect treatment options