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