

Legg-Calvé-Perthes Disease

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BASIC INFORMATION

Description

Legg-Calvé-Perthes disease, or avascular necrosis of the femoral head, is an unusual disease of young, toy- or small-breed dogs. In these dogs, the head of the femur (the part of the thighbone that fits into the hip socket) dies from a disturbance in its blood supply. The affected bone eventually weakens, tiny fractures develop, and the bone collapses. Osteoarthritis (degenerative joint disease) of the hip joint then occurs over time, leading to progressive dysfunction and pain.

Causes

The disease is inherited in the Manchester terrier and may be inherited in other small breeds. The exact cause of interruption in blood flow to the femoral head is unknown.

Clinical Signs

Lameness in a rear leg that is not associated with injury in a young dog is the most common sign. The lameness often worsens over several weeks and may eventually cause the dog to carry the leg (non-weight-bearing lameness). As the leg is used less and bears less weight, the muscles near the hip shrink (atrophy). Manipulation of the hip often causes pain. Occasionally, acute (sudden) lameness develops if the bone collapses.

The average age at onset is 5-8 months, with a range of 3-13 months. Both legs are affected in only 12-17% of the dogs.

Diagnostic Tests

Physical examination findings of pain and decreased mobility of the hip joint in a young, small-breed dog allows a tentative diagnosis. X-rays are needed to confirm the diagnosis and usually show changes characteristic of the disease.

TREATMENT AND FOLLOW-UP

Treatment Options

If collapse and osteoarthritic changes have occurred in response to the disease, the treatment of choice is surgical removal of the femoral head and neck. This procedure is called a *femoral head ostectomy* (FHO). (See also the handout on **Femoral Head and Neck Ostectomy**.) Total hip replacement surgery may be considered in large and small dogs. If both legs are affected, the worst leg is usually operated first, followed by the second leg 4-6 weeks later.

Postoperative anti-inflammatory drugs and/or pain-relief medications may be prescribed. On rare occasions, the disease may be identified early in its course, before collapse of the femoral head occurs. In this instance, putting the limb in a sling to prevent collapse while the bone heals may avoid the need for surgery.

Follow-up Care

Following surgery, the dog is rested for 1-2 days, after which physical rehabilitation exercises and/or low-impact exercises (such as leash walking or swimming) are started. It is critical that the dog begin to use the leg early and often, to avoid a stiff hip joint that is not very functional.

Prognosis

Most small dogs do very well without a normal ball-and-socket joint at the hip, although refinements in total hip replacement surgery may offer better function. If an FHO is performed, the muscles of the thigh hold the leg and hip together, and, over time, the dog often returns to near-normal weight-bearing activity. Obesity should be prevented in these dogs throughout life, to decrease stress on the hip. Affected dogs should not be used for breeding.