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Juvenile Pubic Symphysiodesis (JPS) to prevent hip dysplasia

Hip Dysplasia

Hip dysplasia is defined as a deformity of the coxofemoral (hip) joint that occurs during the growth period. Hip dysplasia is caused by a variety of factors including genetic, overweight in the young puppy and over exercise, all of which contribute to a poorly fitting hip joint. As the dog walks on this joint, arthritis eventually develops, causing pain in the joint. The degree of lameness that occurs is usually dependent upon the extent of arthritic changes in the hip joint.

Most breeds of dogs can be affected with hip dysplasia although it is predominantly seen in the larger breeds of dogs, such as the German Shepherd, St. Bernard, Labrador Retriever, Old English Sheepdogs, etc. There is equal distribution of the disease between male and female dogs.

The typical clinical signs of hip dysplasia are weakness and pain in the hind legs, lack of co-ordination, and a reluctance to rise. Wasting of the large muscle groups in the hind legs may eventually develop. Most owners report that the dog has had difficulty in rising from a lying position for a period of weeks or months; lameness and pain subsequently develop. Again, the severity of signs and progression of the disease usually correlate with the extent of arthritis in the joint. Clinical signs can occur as early as 4-6 weeks of age, but most dogs manifest the disease as a lameness around one to two years of age. Dogs with mild hip dysplasia and minimal arthritis may not become painful and lame until 6-10 years of age.

Tentative diagnosis of hip dysplasia is made on the basis of history, breed, and clinical signs. A large breed dog that has been slow to rise for several months and now is lame is a high suspect for hip dysplasia; a dog which refuses to rise should also be considered a candidate. Because the clinical signs may mimic other diseases, final diagnosis of hip dysplasia can only be made on the basis of specific radiographic (x-ray) findings. To obtain the proper radiographs, dogs must be carefully positioned on the radiographic table. This procedure requires the use of a short-acting anaesthetic or heavy sedation. The radiographs are evaluated for abnormal shape of the hip joint and for degenerative changes (arthritis).

Juvenile Pubic Symphysiodesis (JPS)

A JPS is a minor surgical procedure that can be done on puppies prone to hip dysplasia in order to improve their hips. Before the decision is made to perform the procedure the puppy is examined under general anaesthetic and an x-ray is taken of the hips. Based on the examination and the x-ray if the puppy's hips are abnormal the JPS procedure is performed.

The JPS procedure involves fusing the cartilage on the two sides of the pelvis in order to rotate the hip sockets into a more normal position hence providing a better fit between the femoral head (top of the thigh bone) and the acetabulum (pelvis). This procedure is best done on puppies between 16 and 20 weeks of age, the pelvis of puppies older than 20 weeks of age is usually too developed for the procedure to be successful.

Puppies that have a JPS procedure done are almost always desexed at the same time. This is partly because they are about the right age to be desexed so it is easy to do both procedures in one anaesthetic. The other reason is that puppies with abnormal hips should not be used for breeding as their hip problems can be passed onto their puppies. If the pup does not need the JPS procedure they can still be desexed in the same anaesthetic if you do not intend to breed from them.

The recovery time from the JPS procedure is no longer than a desexing procedure and complications from this procedure are rare. Puppies that have had a JPS procedure are much less likely to get hip dysplasia later in life and those that do have much less severe symptoms.