

Melinda Poole O'Banion, DVM
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CRYPTORCHIDISM

Cryptorchidism is a failure of one or both testicles to descend into the scrotum (meaning a puppy only has 1 testicle or no testicles from birth). It is seen in all domestic animals; it is common in stallions (horses) and boars (goats). It is the most common disorder of sexual development in dogs (10-15%).

Unilateral (only 1 down and 1 up) cryptorchidism is more common, and the male is usually fertile because of sperm production from the normally descended testicle. Having a dog with one or both testicles retained (cryptorchidism) is one of the most common congenital developmental defects in purebred dogs. The incidences of cryptorchidism in dogs range from 1.2 to 10%. In several dog breeds, it is as high as 15 percent. Dogs with cryptorchidism may have reduced fertility or be infertile at adulthood. Cryptorchidism occurs in all breeds, but the toy breeds are at higher risk. Cryptorchidism may be presumed to be present if the testicles can't be felt in the scrotum after two to four months of age. Approximately 75% of the cases of cryptorchidism involve only one retained testicle while the remaining 25% percent involve failure of both testicles to descend into the scrotum. The right testicle is more than twice as likely to be retained as the left testicle.

What causes cryptorchidism?

During development, the testicles are located just behind the kidneys. Each testicle is attached to a cord, called the gubernaculum (looks like saran wrap), whose other end is attached to the scrotum. As the cord shrinks, it pulls the testicle down through the abdomen, through an opening in the body wall called the inguinal ring (in the groin area), under the skin, and into the scrotal sac. Therefore the undescended testicle is found either in the abdomen, the inguinal ring, or under the skin between the rear legs. If both are undescended, which is less common, they are usually both stuck in the abdomen.

The undescended testicle is not able to produce sperm and tends to be smaller than the scrotal testicle because of the higher temperature inside the body. If both testicles are cryptorchid, the dog is sterile. Dogs with one cryptorchid testicle are usually still fertile from the testicle in the scrotum, although he will have less sperm than a normal male. No known medical treatment can cause the affected testicle to descend.

Cryptorchidism is (genetic) heritable and is a sex-limited autosomal recessive trait in dogs. Cryptorchidism is caused by a combination of genetic, epigenetic, and environmental factors. It is commonly seen in families of dogs, although the exact cause is not fully understood. It is a very complex set of genetics and can be carried by females or produced in certain pairings. Related female puppies could be carriers when their brothers are either carriers or cryptorchid themselves. It is not recommended to breed cryptorchid males and they are not allowed in the show ring.

Cryptorchid testicles are more prone to problems such as torsion (twisting) and cancer. An abdominal testicle can twist upon itself, which is referred to as testicular torsion. This torsion cuts off the blood supply to the testicle and causes severe pain to the animal. The only treatment is emergency neutering.

Neutering, which is surgically removing the testicles, can prevent these problems from occurring. Testicular cancer is the second most common tumor in older dogs. Cryptorchid males are up to 13 times more likely to develop testicular cancer than normal dogs.

TAKE AWAY'S: DO NOT breed cryptorchid dogs. Neuter them early. The genetics are very complicated; and females can be involved in the genetic inheritance.