WORLD SMALL ANIMAL VETERINARY ASSOCIATION

Sterilization of Male Dogs by Vasectomy

Vasectomy is a method of sterilization that provides guaranteed inability to successfully breed, while maintaining normal male hormone levels. As with vasectomy in men, the sperm carrying tubes are ligated, while maintaining the testes. This is compared to a traditional castration, where the testes are removed, and male hormones are eliminated.

There is much debate among US veterinarians regarding the use of vasectomy for sterilization of male dogs. Vasectomy makes absolute sense for certain owners and dogs, while for others it may not. Like any **surgical procedure**, owners should make their decision based on a good understanding of the advantages and disadvantages of each sterilization method.

Advantages of sterilization by vasectomy:

The **loss of male hormones** that occurs with routine castration has been associated with several **negative consequences**. Vasectomy preserves these hormones, so the frequency of these conditions after vasectomy should be the same as in an intact male dog.

1. Neoplasia: Loss of male hormones is increasingly being associated with increased risk of developing several common and potentially highly malignant cancers. Included on this list are hemangiosarcoma of the spleen, osteosarcoma (bone cancer), lymphosarcoma, bladder cancer, urethral cancer and prostate cancer.

2. Obesity: Traditional castration predisposes animals to gain weight. Vasectomy does not have this complication.

3. Orthopedic disease: Several common orthopedic conditions, specifically canine hip dysplasia and torn cranial cruciate ligament appear to be more common in dogs after routine castration, especially if the castration is performed at an early age in large breed dogs.

4. Cognitive impairment: This is a common problem in older dogs and is similar to Alzheimer's disease in humans. Loss of male hormones as occurs after routine castration may increase the risk of progression and severity of this condition.

Advantages of sterilization by routine castration:

These are conditions that have been reported to be less common in dogs after routine castration. They would be expected to occur with the same frequency after vasectomy as that in an intact male dog.

1. Testicular tumors: Routine castration eliminates the risk of developing a testicular tumor, whereas vasectomy does not. Fortunately, most testicular tumors are benign, and can be easily removed if they occur.

2. Benign prostatic hyperplasia: This is a condition of prostate enlargement that is very common in older dogs (and men). It can cause varying degrees of difficulty urinating and may predispose to chronic urinary tract infections. It rarely occurs in dogs after routine castration.

3. Perineal hernia: This is a relatively uncommon condition where the supporting muscles next to the rectum deteriorate. Because the rectum can deviate into this area difficulty defecating can occur. Surgical repair is generally needed to treat the problem.

4. Perianal adenoma: These are benign tumors around the anal area that may develop in middle to older age dogs. Their growth is generally dependent on male hormones, so they are extremely rare after routine castration.

Effects on behavior:

When deciding between sterilization by routine castration or vasectomy, comparative effects on behavior are one of the most confusing and poorly understood issues. Despite common belief, male dogs do not necessarily behave better after traditional castration. Loss of male hormones is only expected to decrease what are referred to as **"sexually dimorphic behaviors".** These behaviors include roaming, mounting and urine marking. Behaviors such as barking and hunting will not be affected. Aggression may or may not be affected by castration, and in certain circumstances may be increased. Studies indicate that dogs that have been castrated by traditional means tend to be more fearful and sensitive to handling,

In summary, **vasectomy** offers a good alternative for sterilization in male dogs. Advantages and disadvantages of this method of sterilization should be considered carefully.