Cranial Cruciate Ligament Injury in Dogs

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Dogs frequently injure their cranial cruciate ligament (CCL), the canine equivalent of the anterior cruciate ligament in humans. Rupture of the CCL is the most common orthopedic problem seen in veterinary practices around the world. Harasen 2008. A Wall Street Journal article reports the number of dog knees undergoing cruciate-ligament repair each year in America at more than 1.2 million – approximately five times the number of human procedures, although humans outnumber dogs in the U.S. by nearly five to one. Wall Street Journal 2006.

The cost is high. In 2003, American dog owners spent over 1.3 billion dollars for surgical repair of ruptured CCLs. Wilke et al. 2005.

Surgery is not the only option. Another option is a custom-made orthopedic brace or orthosis for the injured dog. Dr. Sherman Canapp, JR., DVM, MS, Diplomate ACVS, is one of the world's foremost experts on the canine stifle (i.e., the canine equivalent of the knee). Dr Canapp states that long-term success has been obtained with the use of a custom stifle brace created by a certified orthotist. Canapp 2007. Especially for older dogs, for dogs with concurrent medical conditions, or for dog owner's with financial constraints, orthotic treatment should be considered.

Many of the dogs that injure their CCL are likely to be older, and therefore may be good candidates for orthotic treatment with a stifle brace (or stifle orthosis). In terms of the age of canine patients, data are not available on the age of dogs that experience a ruptured CCL. However, one cause of CCL ruptures can be degeneration of the CCL due to age. Harasen 2008. Moreover, data on the age of patients that underwent a surgical procedure to repair a ruptured CCL suggest that especially small dogs that undergo surgery have an older profile. Harasen 2008.

In terms of cost, the repair of a torn CCL can be expensive. Hard data are difficult to come by. A non-scientific review of websites operated by veterinarians indicates that surgery can cost between $500 to $4000 depending on a host of factors including the type of surgery and the breed. One veterinarian puts the average cost at approximately $2600.

And the cost may not end with one operation. The risk is very high that a dog which ruptures one CCL will injure the CCL on the opposite leg. One researcher conservatively estimates that 37% of large and 45% of small breed dogs rupture their contralateral CCL. Harasen 2008.

In terms of the kinds of orthotic treatment available, Canapp recommends using orthotic joints from Tamarack Habilitation Technologies. "'Tamarack' joints can be used to offload the stifle by mimicking the action of a healthy joint." Canapp et al. 2008.

In general, Canapp states that dogs adapt to orthotic devices within days to weeks with appropriate owner supervision and compliance. As Canapp states, "the development of these devices has helped treat and maintain many orthopedic conditions and injuries with great success, with and without surgical intervention. They often provide an alternative to surgery when combined with proper introduction, maintenance and rehabilitation." Canapp et al. 2008.

Keywords: dog brace, dog braces, dog orthosis, dog orthopedic brace, dog braces for legs, canine brace, canine braces, canine orthosis, canine orthopedic brace, canine braces for legs.

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