

NEUROLOGY

Fibrocartilaginous Embolism (FCE)

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Ischemic myelopathy secondary to fibrocartilaginous emboli or FCE is a condition involving necrosis (cell death) of a region of the spinal cord secondary to infarction (obstruction) of the blood supply. The infarction is caused by a microscopic bit of fibrocartilage that enters a spinal artery or vein. The infarction can affect any part of the spinal cord. This results in a blockage of blood flow to the spinal cord (ischemia, similar to a stroke), and the clinical signs/neurologic dysfunction reflect where the blockage has occurred. The condition is typically not painful or progressive after the first 24 hours.

The cause of FCE is unknown. It is also unclear as to how the fibrocartilaginous material enters the bloodstream. Giant and large breed dogs are most commonly affected; however, it may also occur in smaller dogs, with an apparent predisposition in Shetland Sheepdogs and Miniature Schnauzers. Most affected animals are three to six years of age, and male dogs are slightly more prone to FCE than females.

Treatment for an FCE is primarily supportive. It is important to prevent the pet from hurting themselves during the recovery process. It is important to keep the pet confined and in a soft, comfortable bed. Rehabilitation exercises are an important mainstay of treatment for owners to perform with their pet during the recovery process to help maintain and improve their pet's range of motion and strength. It is common to see

some initial improvement during the first two to three days after the injury, then a period where things seem relatively stable for 10-14 days. During this time, new blood vessels are growing into the injured area to provide blood supply and allow for healing. After this 10-14 day period, there typically is significant but gradual gain. It is important during recovery to watch for any urinary tract infections as many dogs cannot completely empty their bladders.

Many dogs will make a functional recovery after an FCE, but it can take time. Some dogs will have persistent weakness and/or ataxia after the injury has healed due to permanent damage to the spinal cord. It is important to protect the pet's paws while they are in the recovery process so that they do not get wounds from scuffing. Using fabric hiking-type booties to protect the pet's feet is recommended.