Research Note: In Cases of Vasculitis, Consider Circovirus

The complete genome of a novel dog circovirus (DogCV) was characterized from the liver of a dog with severe hemorrhagic gastroenteritis, vasculitis, and granulomatous lymphadenitis. Additional dogs with vascular and granulomatous lesions were identified and examined for distribution of DogCV. Real-time PCR analysis showed a prevalence of 11.3% and 6.9% in fecal samples from dogs with diarrhea and healthy dogs, respectively. Of the DogCV+ dogs with diarrhea, 68% were coinfected with >1 other enteric pathogen; it is unclear what the role of this coinfection was in the pathogenesis of disease. DogCV DNA was also found in 3.3% of blood samples from dogs with thrombocytopenia and neutropenia, fever of unknown origin, and past tick bite. Most known species of *Circovirus* infect birds, causing signs including malformations and necrosis of the integument, lymphoid depletion, and immunosuppression. Whether and when DogCV causes disease requires further investigation; however, circovirus, alone or in coinfection with other pathogens, should be considered in cases of unexplained vasculitis. DogCV might also be a complicating factor in other canine infectious diseases.

Source

Circovirus in tissues of dogs with vasculitis and hemorrhage. Li L, McGraw S, Zhu K, et al. *EMERG INFECT DIS* 19:534-541, 2013.

FOCUS Understanding Stifle Joint Radiolucency

This study examined tibial tuberosity radiolucency (TTR) on radiographs to better understand its causes and significance. Radiographs (n = 675) of canine stifle joints were reviewed; 21.5% were found to have TTR proximal and caudal to the tibial tuberosity. Radiolucency (ie, dark areas) ranged from small and faint to larger and well-defined. For dogs that had bilateral stifle radiographs available (n = 52), radiolucency was bilateral in 96.2% of cases. Radiolucency size did not correlate with stifle disease. Breed size was significantly associated with TTR; toy-, small-, and medium-breed dogs were more commonly affected. Young age and medial patellar luxation (MPL) were also significantly associated with TTR. TTR may be caused by a retained cartilage core and may be associated with MPL. A cause-and-effect relationship could not be established, and further studies to identify the cause for this radiographic lesion are warranted.

Commentary

When contralateral limb radiographs were available, 96.2% had bilateral lucency. Dogs with lucency were 10 times as likely to have medial patellar luxation and much less likely to have a cranial cruciate ligament tear. No correlation was noted between radiolucency size and MPL grade. Histologically, these areas were comprised of hyaline cartilage and were consistent with retained cartilaginous cores near the growth plate.

It was not clear whether the retained cartilage was present because of other skeletal abnormalities usually found in dogs with MPL (eg, tibial torsion, femoral varus). If noted on a radiograph, this radiolucency should not be confused with neoplastic disease, but patellar disease should be investigated.—*Jonathan Miller, DVM, MS, DACVS*

Source

Prevalence, association with stifle conditions, and histopathologic characteristics of tibial tuberosity radiolucencies in dogs. Paek M, Engiles JB, Mai W. *VET RADIOL ULTRASOUN* 54:453-458, 2013.

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