Національний університет біоресурсів і природокористування України

Факультет ветеринарної медицини

НДІ Здоров'я тварин

«ЄДИНЕ ЗДОРОВ'Я – 2022»

Матеріали Міжнародної наукової конференції

22-24 вересня 2022 р.
НУБіП України, м. Київ

UDC:636.7.09:616.712-073

THE USE OF COMPUTED TOMOGRAPHY IN DIAGNOSIS OF THE UNUNITED ANCONEAL PROCESS IN THE COURSE OF THE ELBOW DYSPLASIA IN DOGS – OWN OBSERVATIONS

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Background -Elbow dysplasia (ED) is the abnormal development of the elbow joint. ED is a consequence of primary leasions of the elbow joint, which may occur singly or in combination, causing the development of irreversible and progressive secondary degenerative joint disease leading to pain and lameness. This disorder can occur unilaterally or bilaterally, especially in young dogs, between 4-6 months old. ED is commonly seen in fast-growing, large to giant of breeds dogs, such as: Labrador Retriever, Rottweiler,Bernese Mountain Dogs, Golden Retriever and German Shepherds. According to International Elbow Working Group (IEWG) the primary leasions are: medial coronoid process disease (MCPD), ununited anconeal process (UAP), osteochondritis dissecans of the medial condyle of the humerus (OCD) and elbow incongruity (EI, INC). The most common primary leasion is medial coronoid process disease.

The separate ossification centre of the anconeal process, occuring only in larger breeds, appears at 11–14 weeks and the anconeal process is united with the olecranon at 20–22 weeks. A definitive diagnosis of ununited anconeal process can be made if the anconeal process is not united after 24 weeks of age. The aetiology of an ununited anconeal process is not clear. Traumatic, metabolic and genetic factors have been incriminated as its accompanying causes.

The purpose of this study was to present own undertaken observations in the diagnosis of the ununited anconeal process in the course of the elbow dysplasia diagnosed in dogs.

The study included 25 dogs with lameness and pain during clinical examination, in large to giant breeds (body weight 20–35 kg), different genders, aged from 6 to 12 months. The examinations were performed using a Siemens Somatom Emotion 16-row computer tomograph (CT). The dogs were qualified for the CT examination on the basis of anamnesis, clinical examination and blood laboratory tests (morphological and biochemical examinations). Right before initiating the examination, animals were brought up to the starvation diet (12 hours- solid state food, 6 hours – thirst). The dogs were premedicated with protocol: medetomidine (prep. Cepetor, 1mg/ml, ScanVet Poland; dose: 10-20 µg/k) i butorphanol (prep. Butomidor, 10 mg/ml, ORION PHARMA; dose: 0,1 mg/kg) in one intramuscular injection. Each dog was situated in the sternal position. The long axis of the sternum was paralel to the CT table's track. The CT scans were obtained using mean setting of 130kV and 190 mAs. Total displacement factor was 1.0. The images were gained with the soft tissue filter (WW350 Wl 40) and bone filter (WW 1500 WL 450).

Out of 25 examined animals, elbow dysplasia was found in 15 dogs, ununited anconeal process was recognized in 4 dogs from this group (1 dog bilateral; 3 dogs unilateral).

Based on the own experience, it was confirmed that ununited anconeal process is uncomplicated to be recognized in computed tomography and the least frequently identified primary leasion of elbow dysplasia in young dogs at the same time. In the examinated group UAP was more frequent unilaterally.