



RADIOGRAPHIC AND COMPUTED TOMOGRAPHY FINDINGS IN BELGIAN SHEPHERD DOGS WITH MILD ELBOW DYSPLASIA

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First published: 23 June 2009 | <https://doi.org/10.1111/j.1740-8261.2009.01551.x> | Citations: 17

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Presented at the Annual Scientific Conference of the European Association of Veterinary Diagnostic Imaging, Norway, 2008.

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Abstract

We compared computed tomography (CT) and radiographic findings of Belgian shepherds with grade 1 or borderline elbow dysplasia to determine whether the radiopaque area dorsal to the anconeal process and seen in mediolateral 45° flexed radiographs is formed by osteophytes, or whether it is an anatomic variation. Eighteen dogs with screening results 0/1, 1/0, or one or both elbows graded as borderline were studied. The radiographs were evaluated according to International Elbow Working Group guidelines and compared with CT images. A fragmented medial coronoid process was seen in five joints, and remaining 31 joints were considered free of dysplasia based on CT images. In radiographs, height of the radiopaque area on the anconeal process was 0–2.7 mm in dysplastic and 0–3.0 mm in other joints. Sensitivity of this sign as dysplasia indicator was 40% and specificity 29%. All dysplastic joints and three of the other joints had blurring of the cranial edge of the medial coronoid process. Subtrochlear sclerosis was seen in four dysplastic joints and in three other joints. Both changes were significant indicators of dysplasia ($P<0.001$). Sensitivity and specificity of these phenomena as dysplasia indicators were 80% and 90%, respectively. We conclude that the radiopaque area on the anconeal process might not always be osteophyte formation in Belgian shepherds and should not be used as the sole criterion for dysplasia. Blurring of the medial coronoid process cranial edge and ulnar trochlear notch sclerosis are reliable signs of elbow dysplasia and may be beneficial in screening protocols.

References

Citing Literature



References



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