

Elbow Incongruity

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In the Literature

Alves-Pimenta S, Ginja MM, Colaço B. Role of elbow incongruity in canine elbow dysplasia: advances in diagnostics and biomechanics. *Vet Comp Orthop Traumatol.* 2019;32(2):87-96.

FROM THE PAGE ...

Incongruity between the radius and ulna, the radius and humerus, and/or the ulna and humerus can be important components of elbow pain and subsequent dysplasia. A short radius increases pressure on the coronoid process of the ulna and can lead to fragmentation, which can be diagnosed via radiography or CT. Rotation between the humerus and ulna during weight-bearing can also increase pressure on the coronoid process.

In this systematic review, the authors summarize the current knowledge on elbow incongruity and its assessment. When radiographic signs of both radioulnar and humeroulnar incongruity were used for assessment, radiography yielded an 88.8% sensitivity and 91.7% specificity for diagnosis of elbow incongruity. Arthroscopy has also been shown to be useful for diagnosis; several studies have found sensitivity using this modality to be 94% to 98% and specificity to be 81% to 89%. MRI and joint ultrasonography, however, were not found to be as useful in the evaluation of elbow incongruity. The gold standard for diagnosis is CT with 1-mm slice thickness.

... TO YOUR PATIENTS

Key pearls to put into practice:

- 1** When evaluating dogs for lameness in the elbow joint, it is important to consider that elbow incongruity may be a contributing cause of lameness.
- 2** Mediolateral extended radiography and arthroscopic measurement of the joint space can aid in the evaluation of the elbow joint, but CT with 1-mm slice thickness is the gold standard for diagnosis of elbow incongruity.
- 3** Although there are 2 techniques (ie, proximal abducting ulnar osteotomy, biceps ulnar releasing procedure) to help relieve higher loading on the medial side of the elbow, these techniques have not been proven to be beneficial in dogs long-term, and there is no known best treatment for elbow incongruity.