

WHAT IS YOUR DIAGNOSIS

Pranee Tuntivanich¹ Suwicha Chuthatep¹ Rampaipat Tungjitpeanpong²

Signalment

A 6-month-old male Fila Brasileiro

History

The dog showed lameness and stiffness of both forelimbs and reluctance to exercise. Mild turned out forelimbs were noticed when the dog stand.

Clinical Examination

The dog was in pain when both elbows were flexed via orthopedic examination. The dog was clumsy down the stairs because of sored elbows. Mild swelling and restricted range of motion of both elbow joints were revealed during palpation.

Radiographic Examination

Flexed mediolateral radiographs of both elbow joints were taken after standard radiograph did not show any obvious abnormality.

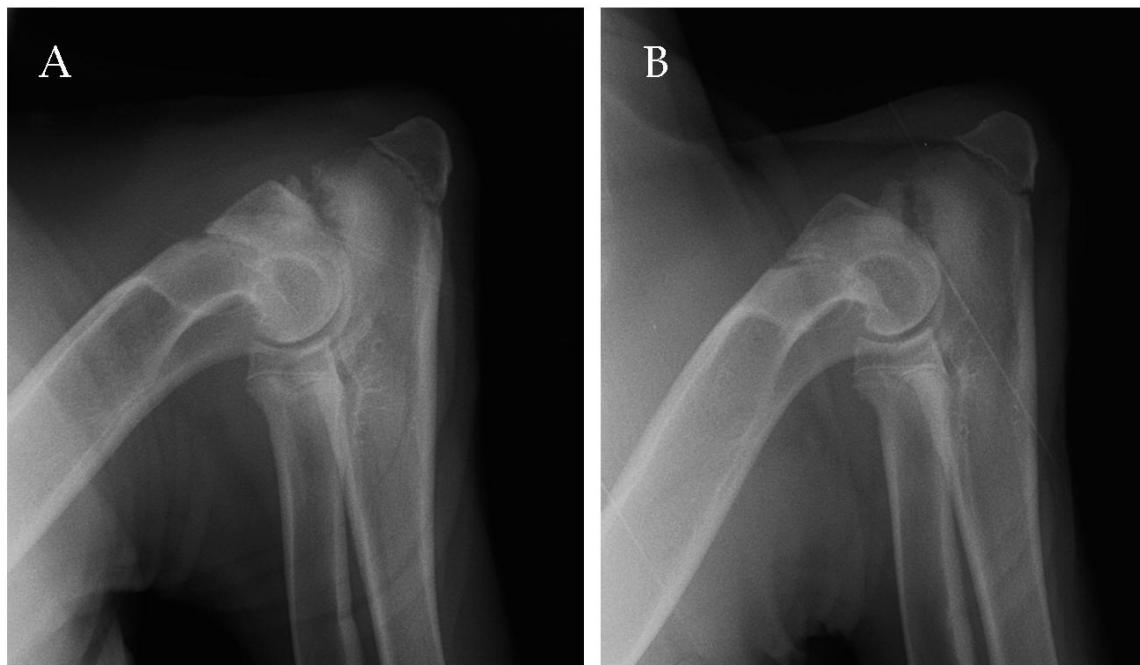


Figure 1A, B. Flexed mediolateral radiographs of the right and the left elbow joints.

Give your diagnosis and turn to the next page.

¹ Department of Veterinary Surgery, Faculty of Veterinary Science, Chulalongkorn University, Bangkok 10330, Thailand

² Diagnostic Imaging Unit, Small Animal Teaching Hospital, Faculty of Veterinary Science, Chulalongkorn University, Bangkok, Thailand

Radiographic findings

Flexed mediolateral radiographs (Fig. 1A, B) revealed wide radiolucent line separating the anconeal process from the olecranon in both elbow joints. These radiolucent lines had irregular margin and variable width. Increase bone opacity at the periarticular area, which was resulted from osteoarthritis was also detected in both elbow joints.

Radiographic diagnosis

Ununited anconeal process of both elbow joints



Discussion

Abnormal development of elbows, elbow dysplasia, is a multilesional development usually occurring to both elbow joints. Asynchronous growth of radius and ulna as well as proximal ulnar dysplasia has recently been suggested the causes of this abnormality. Various parts of elbow joints are affected; osteochondrosis of the distomedial aspect of the humeral trochlea, separation of anconeal process and fragmented medial coronoid of the ulna.

Normally, anconeal process is a part of ulna of which initially the proximal grows separately portion, then joins together with the rest of it around 120- 150 days of age. Abnormal development of the elbow creates pressure on the anconeal process, which stops the joining between anconeal process and ulna. Proper radiograph with flexed mediolateral view displacing medial epicondylar physis away from anconeal process is an imaging diagnostic method to assess radiolucent separated line. Periarticular sclerosis can also be detected if severe. In case of fragmentation of medial coronoid process is suspected, computed tomography may be considered for definitive diagnosis.

Figure 2 Flexed mediolateral radiograph of the right elbow showed abnormal wide radiolucent line (large white arrow) separating the anconeal process from the olecranon that should not be observed in normal puppy older than 120-150 days. An opaque area of periarticular bone sclerosis (small white arrows).

Reference

Pollard R.E. and Wisner E.R. 2013. Orthopedic Disease of Young and Growing Dogs and Cats. In: Textbook of Veterinary Diagnostic Radiology. 6th ed. Elsevier Saunder Company. Missouri. 267- 282.