

IT'S YOUR CASE

Species: Canine Breed: Labrador Retriever Sex: Female Entire Age: 4 months

Clinical History:

Bilateral thoracic limb lameness and pyrexia. Swelling of the distal radius and ulna with pain upon palpation

Details of study and technical comments:

Orthogonal radiographs of the shoulder are provided for evaluation.

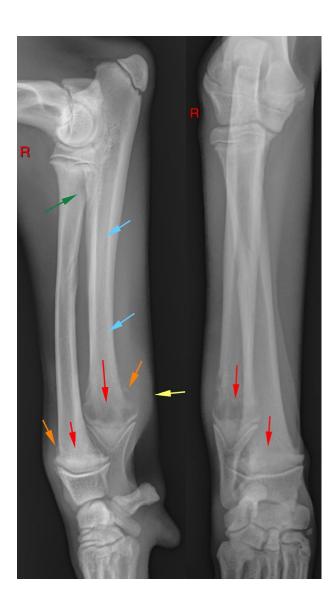
Diagnostic interpretation:

There is reduced mineral opacity of the distal metaphyses of the radius and ulna (red arrows). The reduced opacity parallels the distal physeal region creating the appearance of a "double physeal line". There is mild smooth periosteal response along the metaphyseal regions (orange arrows) and regional soft tissue swelling (yellow arrows).

Minimal to no changes are in the proximal radial metaphysis (green arrow).

Subtly, increased opacity is in the ulnar diaphyseal medullary space (light blue arrows) resulting in reduced sharpness of the corticomedullary boundary.





Conclusions:

- 1. Metaphyseal osteopathy (hypertrophic osteodystrophy). Alternative differentials, although less common, include metaphyseal osteomyelitis and juvenile polyostotic lymphoma.
- 2. Possible concurrent ulnar panosteitis, or artefactual secondary to superimposed soft tissue swelling.

Additional comments:

The long bone changes are consistent with metaphyseal osteopathy (hypertrophic osteodystrophy), and are compatible with the clinical signs of lameness, fever, swelling and pain on palpation in this young large-breed dog. This condition is systemic, and similar radiographic findings would be expected in other limbs. The pathophysiology of this disease is poorly understood however it is commonly responsive to conservative management. Although neoplasia is unlikely, juvenile polyostotic lymphoma has been documented in a variety of clinical presentations. For this reason, the patient's response to therapy should be closely monitored with consideration of recheck radiography if symptoms are progressive or non-responsive to management.



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The impression of diaphyseal medullary sclerosis is concerning for concurrent panosteitis. However, it is possible that this increased opacity is artefactual due to superimposition of the severe, circumferential soft tissue swelling.

LITERATURE:

Langley-Hobbs, S. J., Carmichael, S., Lamb, C. R., Bjornson, A. P., & Day, M. J. (1997). Polyostotic lymphoma in a young dog: a case report and literature review. *The Journal of small animal practice*, *38*(9), 412-416.

