



A CASE OF DIFFUSE IDIOPATHIC SKELETAL HYPEROSTOSIS IN A YOUNG COCKER SPANIEL



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CASE DESCRIPTION:

A 3-year-old female Cocker Spaniel presented for a history of progressive stiff gait and a hind limb left lameness since 2 weeks. Physical examination revealed a stiff, pacing gait in all four limbs with lameness of the left hind limb, body condition score was 7/9. Mild pain was elicited on palpation of the lumbosacral spine with limited cervical range of motion. Based on the imaging findings, presumable diagnosis of DISH was made. Complete blood count and biochemistry profile were unremarkable. A 6 months later CT follow up was made, but the clinical condition remained stable.

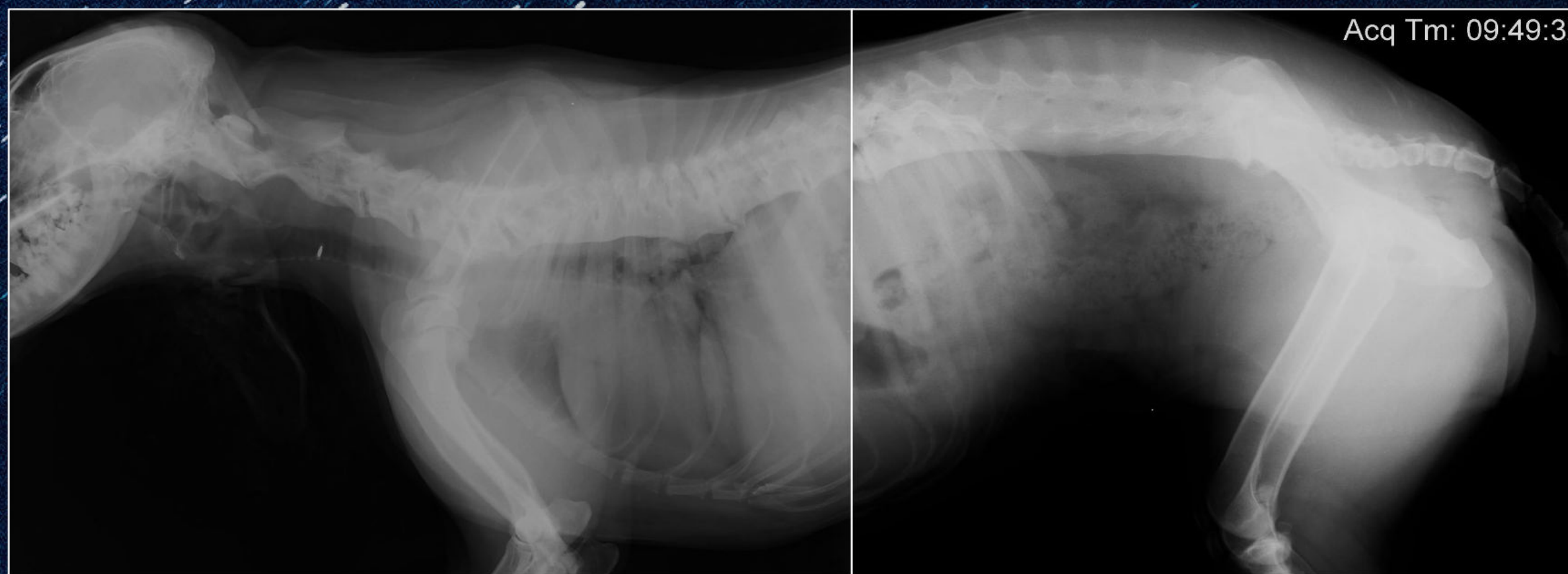


WHAT IS DISH?

DIFFUSE IDIOPATHIC SKELETAL HYPEROSTOSIS (DISH) IS A COMMON, SYSTEMIC DISORDER OF THE AXIAL AND PERIPHERAL SKELETON. IT RESULTS IN OSSIFICATION OF SOFT TISSUES, SUCH AS LIGAMENTS OR ENTHESES. DISH WAS ALSO DIFFERENTIATED FROM ANKYLOSING SPONDYLITIS BY DIFFERENCES IN CLINICAL, PATHOLOGICAL, AND RADIOLOGICAL FEATURES. VARIOUS ETIOLOGIES HAVE BEEN POSTULATED HOWEVER IS OFTEN LINKED TO OBESITY. THE PURPOSE OF THESE CASE DESCRIPTION IS TO DESCRIBE A SEVERE FORM OF DISH IN A YOUNG COCKER SPANIEL DOG.

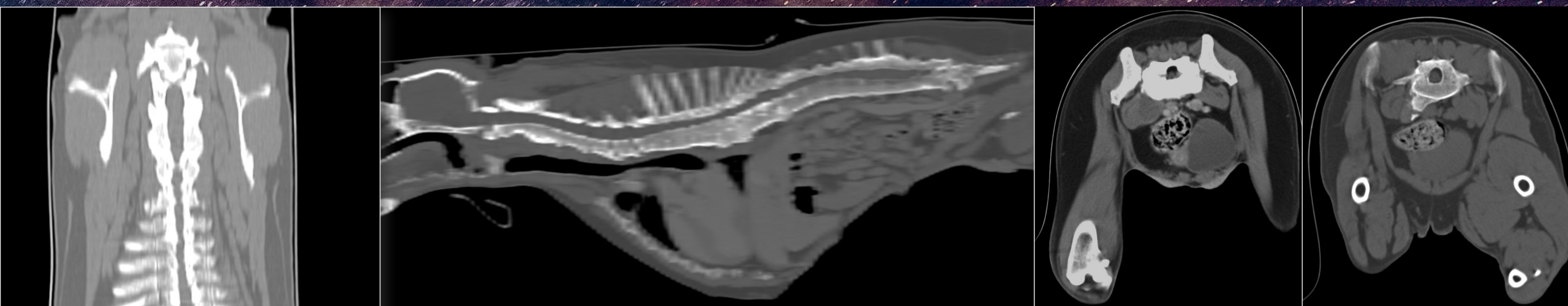
RADIOGRAPHIC STUDY:

Lateral and ventro-dorsal radiographs of the cervical and thoracolumbar spine revealed proliferative osseous lesions along the entire length of the spine with varying degrees of severity and distribution resulting in a complete fusion of the thoracolumbar tract.



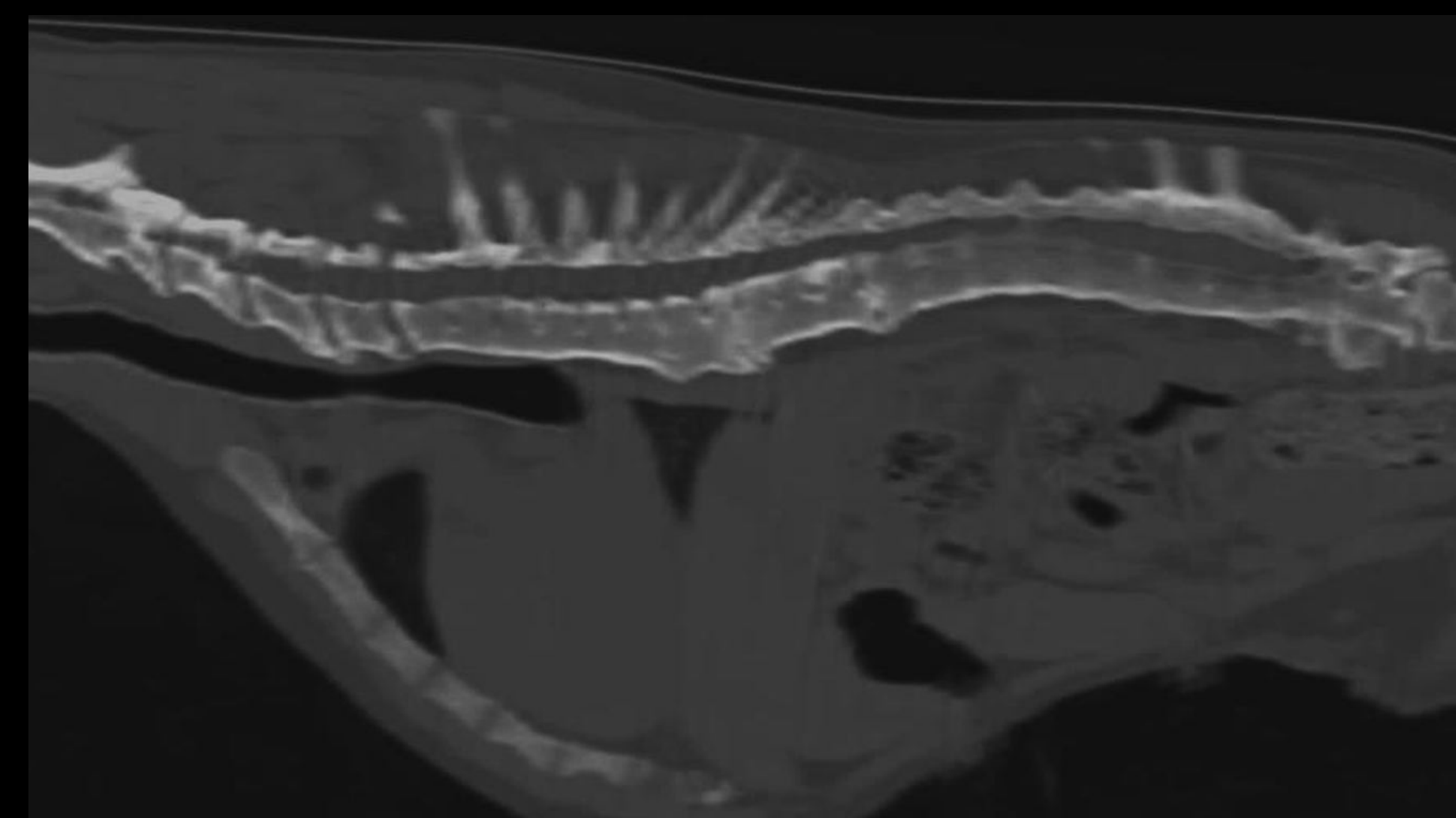
CT EXAMINATION:

CT images of the spine revealed that the cortical margins and architecture of affected vertebral structures were maintained, and ossification appeared to be extracortical. The T1-L7 tract was completely fused as showed in figures.



CT IMAGE DESCRIPTIONS: L7-S1 osseous lesions were distributed along ventral and lateral aspects of vertebral bodies, forming an irregular and bulky bony bridge across intervertebral disc space, deforming the spinal canal, with increased sclerosis; is also easily visible a lateral curvature of the spine (scoliosis) in a dorsal plane reconstruction window. The CT scan also revealed a mass-lesion in the medio-lateral aspects of the left iliopsoas muscle, with mild hypodensity, with no enhancement after contrast administration. At the 6-months follow up the lesions still remain unchanged.

CT FOLLOWUP: Lateral plane window at the 6-months follow up which show a mild progression of the disease with increase of bone proliferation especially on the ventral aspect of the vertebral body of the lumbosacral tract with no progression of the clinical symptoms.



CONCLUSION: IN DISH, INVOLVEMENT OF THE INNERVATED PERIOSTEUM MAY CONTRIBUTE TO SPINAL PAIN. THE MASSIVE NEW BONE FORMATION MAY DISLOCATE AND COMPRESS SURROUNDING SOFT TISSUES SUCH AS VENTRAL LUMBAR MUSCLES, NERVE ROOTS OR ALSO SPINAL CORD, PRODUCING MORE PAIN. AS IN HUMANS, DOGS WITH SPINAL STIFFNESS AND/OR PAIN OF THE CAUDAL LUMBAR SPINE COULD BENEFIT FROM CONSERVATIVE TREATMENT WITH NSAIDS AND WEIGHT LOSS. SURGERY MAY BE NECESSARY IF CONSERVATIVE TREATMENT DOESN'T PROVIDE ADEQUATE SYMPTOM RELIEF OR IF SEVERE NEUROLOGICAL DEFICITS OR VERTEBRAL FRACTURES ARE PRESENT. DISH SHOULD BE SUSPECTED IN ANY CASE OF WIDESPREAD EXTRACORTICAL OSSIFICATION AFFECTING ENTHESES AND SOFT TISSUES OF THE AXIAL SKELETON. VETS SHOULD BE AWARE OF THE OCCURRENCE AND THE POSSIBLE CLINICAL RELEVANCE OF DISH, WHICH MAY CAUSE STIFFNESS AND PAIN OF THE SPINE.

REFERENCES: [1] Kranenburg HC. et al. «Diffuse idiopathic skeletal hyperostosis (DISH) and spondylosis deformans in purebred dogs: A retrospective radiographic study» The Veterinary Journal 2011 (190) e84-e90. [2] De Decker S. et al. «Thoracic and Lumbar Vertebral Bone Mineral Density Changes in a Natural Occurring Dog Model of Diffuse Idiopathic Skeletal Hyperostosis» PLOS ONE April 21, 2015. [3] Kranenburg HC. et al. "The dog as an animal model for DISH?". Eur Spine J (2010) 19:1325-1329.

