

Case 3

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Signalment and History

- 4 year old female spayed Old English Mastiff
 - Presented with history of lethargy
 - Pelvic limb paraparetic

Physical Exam Findings

- Bright , alert and responsive
- Febrile T: 104.4
- Roughened, dry hair coat with alopecia over caudal/dorsal hip area
- Dermatitis generalized over tail, with multifocal patches of crusting, sloughing, and exudate

Physical exam Findings

- Non ambulatory with pelvic limb paraparesis/plegia (minimal motor noted in right pelvic limb)
- Conscious proprioception/ postural reaction: absent in pelvic limbs bilaterally; normal in thoracic limbs
- Right cutaneous trunci deficit T3-L3 and left cutaneous trunci deficit T3-L3 weak but present
- Weak and delayed left pelvic limb withdrawal reflex
- Unremarkable cranial nerves
- Involuntary urination

Thoracic radiographs taken prior to MRI examination are available.

- 1) Describe your radiological findings
- 2) List your diagnosis/differential diagnosis

Left Lateral



Left Lateral



Right Lateral



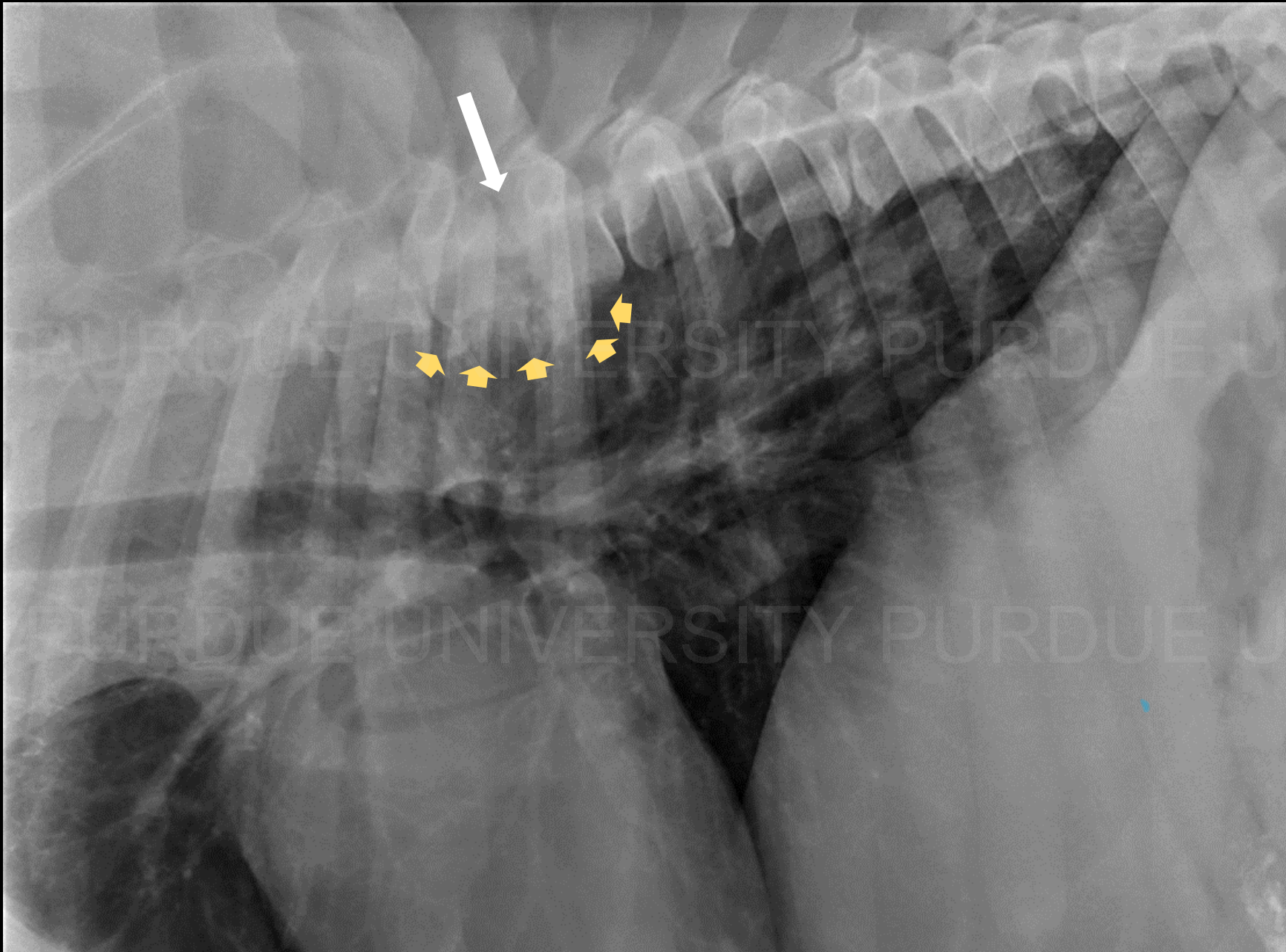
Ventrodorsal



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Radiological Findings

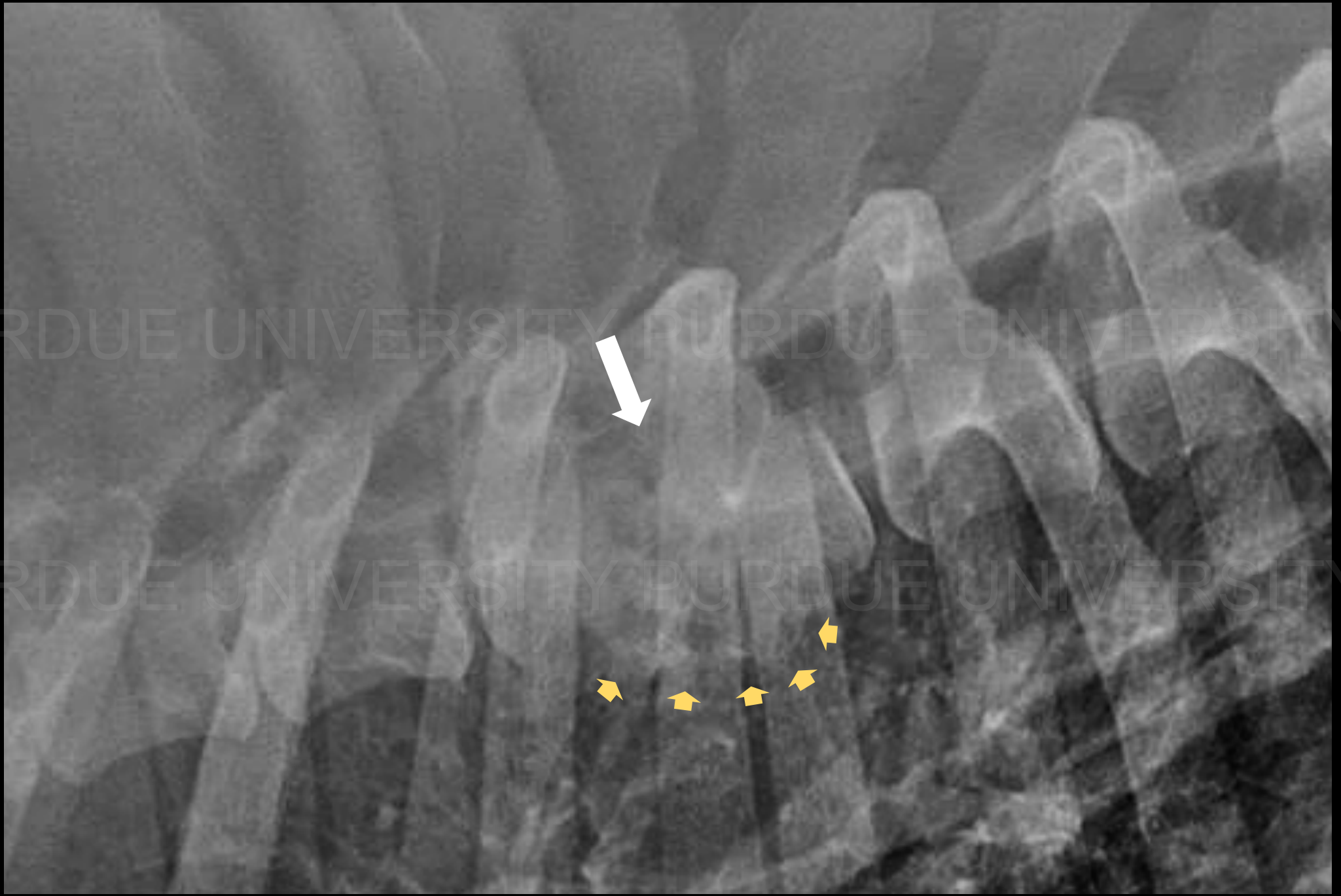
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**Narrowing of T5-T6
intervertebral disc
space**

**Irregular lysis of
the T5 caudal
endplate and T6
cranial endplate**

**Ill-defined, irregular
and heterogenous
mixed soft tissue
and mineral
opacities ventral to
T5 and T6**



Radiographic Diagnosis

Chronic T5-T6 discospondylitis

Remarks

Main radiological findings of discospondylitis:

Early

- Narrowed intervertebral disc space (very early)
- Irregularities/lysis of the vertebral end plates
- Subsequent widening of the intervertebral disc space
- Subluxation of the adjacent vertebrae

Late

- Sclerotic vertebral endplates
- Markedly narrowed to collapsed intervertebral disc space
- Fracture, scoliosis
- Spondylosis
- Ankylosis

Remarks

Infectious causes of discospondylitis:

- Common bacteria:

- *Staphylococcus intermedius*
- *Staphylococcus aureus*
- *Streptococcus sp.*
- *E coli*
- *Brucella canis*

- Common fungal:

- *Aspergillus* species,
- *Paecilomyces* species
- *Coccidioides immitis*

Remarks

- Route of infection:
 - Hematogenous
 - Direct inoculation (eg: tracking grass awn)
- Males are 2X more likely than female
- Common clinical signs:
 - Spinal pain
 - Fever
 - Neurological deficits (may or may not be present)

Remarks

- Once a diagnosis of discospondylitis is made, whole spine radiographs are recommended (at least laterolateral views) for screening for possible other sites of discospondylitis and to serve as comparison with follow up radiographs
- Other routine tests:
 - Urine culture (both bacterial and fungal)
 - Complete blood count, serum biochemistry and blood culture
 - Rule out Brucellosis
 - Echocardiography (to ruled out endocarditis)

References

1. Thomas WB. Diskospondylitis and Other Vertebral Infections. *Veterinary Clinics of North America: Small Animal Practice*. 2000 Jan;30(1):169–82.
2. da Costa RC, Samii VF. Advanced Imaging of the Spine in Small Animals. *Veterinary Clinics of North America: Small Animal Practice*. 2010 Sep;40(5):765–90.
3. Kirberger RM. Early diagnostic imaging findings in juvenile dogs with presumed diskospondylitis: 10 cases (2008–2014). *Journal of the American Veterinary Medical Association*. 2016 Sep;249(5):539–46.

References

4. Burkert BA, Kerwin SC, Hosgood GL, Pechman RD, Fontenelle JP. Signalment and clinical features of diskospondylitis in dogs: 513 cases (1980-2001). *Journal of the American Veterinary Medical Association*. 2005 Jul;227(2):268–75.
5. Finnen A, Blond L, Parent J. Cervical discospondylitis in 2 Great Dane puppies following routine surgery. *Canadian Veterinary Journal*. 2012 May;53(5):531–4.
6. Auger J, Dupuis J, Quesnel A, Beauregard G. Surgical Treatment of Lumbosacral Instability Caused by Discospondylitis in Four Dogs. *Veterinary Surgery*. 2000 Jan;29(1):70–80.