

## CASE STUDY

# CT-SCANNING OF A 9 MONTH OLD FRENCH BULLDOG WITH MALFORMATION OF THE VERTEBRAE, PERFORMED AT ØSTERGAARDS DYREHOSPITAL, TRANBJERG

### INTRODUCTION

Malformation of the vertebrae is frequently encountered in a variety of breeds, such as the English Bulldog, French Bulldog, Pug, Pekinese and Boston Terrier – ie. the ones being "screw-tailed". Most cases show minor or no clinical signs (1,2,3,4).

### CASE

This is a case of a 9 month old French bulldog, presented in the clinic with abnormal gait. The owner's complaint was abnormal gait, no signs of pain but with an audible click.

The exam showed no signs of pain but when the dog was seen in movement, both walk and trot, it had a tendency to drag its hind legs. There was excessive wear of the toenails on both hind legs. Palpation of the hind legs and of the back revealed no pain, but there was an audible click when each of the hips were extended. There was normal proprioception on both hind legs and the sense of pain was present in both hind legs. The dog was unable to hop from side to side on the left hind leg.

The dog had radiographs and CT scans performed. As evident on the radiographs, the dog suffered from both hip dysplasia and congenital malformation of the vertebral canal, both hemivertebrae and kyphosis. This is easily diagnosed with radiographs, but the CT scan reveals significant narrowing of the vertebral canal, which is harder to detect on the radiograph.

The dog was later euthanized due to the extent of changes present.



Fig1:Hip dysplasia

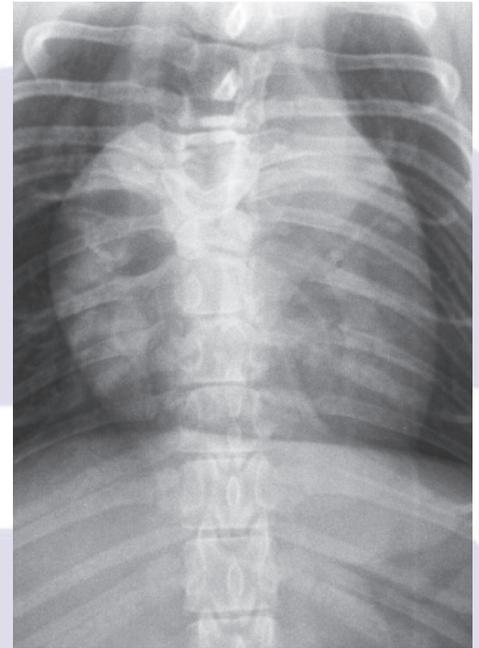


Fig 2:Congenital vertebral canal deformation

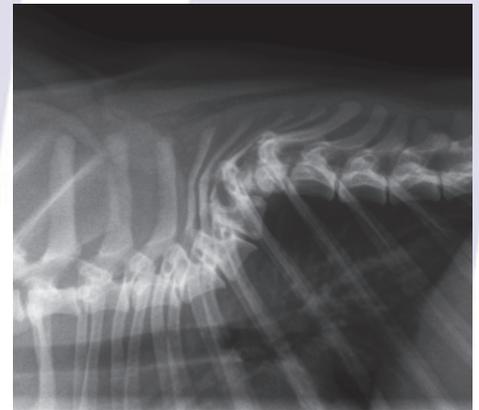


Fig 3:Congenital vertebral canal

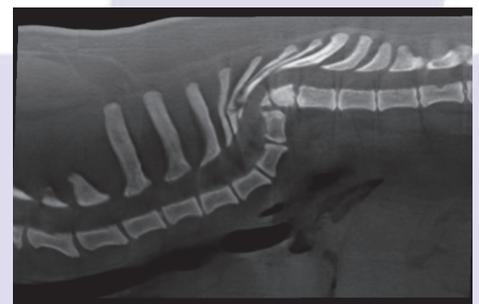


Fig 4:CT scan of the thoracic vertebrae

### CONCLUSION

Even with cases where a definitive diagnosis can be made with radiographs, using a CT scanner will improve images and give the surgeon, clinician and the client a better view of the extent of changes present and will improve the ability to make an accurate diagnosis.

- 1) Morgan JP. Congenital anomalies of the vertebral column of the dog: A study of the incidence and significance based on a radiographic and morphometric study. J Am Vet Radiol Soc 1968; 9:21-29
- 2) 275. Done SH, Drew RA, Robins GM, et al. Hemivertebra in the dog: clinical and pathological observations. Vet Rec 1975; 96:313-317. - Pubmed.
- 3) Drew RA. Possible association between abnormal vertebral development and neonatal mortality in Bulldogs. Vet Rec 1974:480-481.
- 4) 277. Kirberger RM. Congenital malformation and variation of the lumbar vertebrae in a dog. J S Afr Vet Assoc 1989; 60:111-112. - Pubmed.

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