

## MEDULLARY SYNDROME OCCURRED DUE TO A FIBROSARCOMA OF BONE OF THE VERTEBRAL BODY

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### Abstract

*In this report, a 7 years old male Pekingese dog case is described.*

*The dog presented for a medical investigation with a complex medullary syndrome (motility and sensitivity of the hind limb abolished). From history, we deduced that this paralysis of the hind limb was installed gradually.*

*Clinical examination was followed by X-ray examination, which showed significant osteolysis of the L6 vertebral body. This lesion has a direct connection with the symptoms being the cause of the hind limb paralysis. Sampling of biological material by excisional biopsy and later of the histological examination of it, confirmed the presence of a malignant process, namely a fibrosarcoma of bone.*

*It is important to point out that malignant neoplastic process of the spine have significant compressive effects on the nerve substance (spinal cord) causing clinical expression with a progressive character, from motility and sensitive mild dysfunction to its abolition.*

**Key words:** medullary syndrome, excisional biopsy, fibrosarcoma of bone.

### INTRODUCTION

Fibrosarcoma of bone is a mixed malignant tumor that affects the bone tissue being usually localised in the appendicular skeleton, and rarely in the afferent axial skeleton of bone tissue (Moore et al., 2000).

As all chronic progressive diseases common to tissues localised near to the spinal cord, also fibrosarcoma of bone causes some motor and sensory progressive dysfunction. It is very important that these spinal disorders be diagnosed earlier to determine the prognosis and therapeutic protocol as soon as possible (Dickerson et al., 2001).

The diagnosis protocol is very complex, consisting of clinical, radiological examination, RMN, (Aembrust et al., 2004 and Pooya et al. 2004) but for a certain diagnosis it is used the histological examination, preceded by excisional biopsy.

### MATERIALS AND METHODS

The case is represented by a 7 years old male Pekingese dog.

The subject presented for a medical investigation, clinically expressing paraplegia (paralysis of the hindlimb), with the motive and sensory function of the hindlimb abolished (Fig. 1).

After the clinical examination, a spinal compression syndrome was suspected. In order to establish a diagnosis of certainty, the animal was then successively subjected to a radiological examination, biopsy excision and histological examination.



Figure 1. Motive and sensitive disfunction of the hindlimbs

## RESULTS AND DISCUSSIONS

After the clinical examination, the animal was subjected to the radiological examination, using a ventro-dorsal incidence, with a maximum extension of the pelvic limbs.

After the radiological examination (Fig. 2) the osteolysis of L6 vertebral body was emphasized with the lack of the left transverse process.



Figure 2. Osteolysis of L6 vertebral body.

Considering that the bone structure affected by severe osteolysis (lumbar vertebrae) has an intimate contact with the nerve substance (spinal cord), it is clear that the damage on the nerve substance is irreversible, for which the prognosis is grave. There were subsequently taken modified tissue samples for histological examination, using radio guidance (Fig. 2). It was seen on the smear the presence of an unstructured necrosis (necrotic cell rests with nude nuclei), gaps of non-uniform compact bone, rich fibroblastic cellularity which delimitates the necrotic area and penetrates the bone gaps, disorganizing the compact structure. The morphological appearance is specific to a fibrosarcoma of bone (Fig. 3). Fibrosarcoma of bone like other chronic lesions with peridural localization can cause some nervous syndromes expressed by sensitivity and motility disturbances of variable intensity.

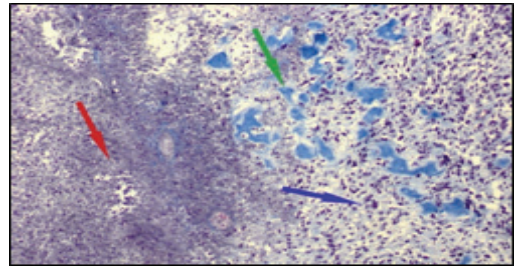


Figure 3. Necrotic cell rests (red arrow), lacunae in compact bone tissue (green arrow) and disorganized compact structure (blue arrow). Fibrosarcoma. (H&E stain, 10x.)

## CONCLUSIONS

Medullary syndrome is a complex etiopathogenesis as etiological factors are involved: inflammatory, degenerative processes, neoplastic processes, met nearby anatomical structures in the spinal cord.

Neoplastic processes present in spinal bone structures cause motive and sensory dysfunction, being directly correlated with the intensity of the lesion.

Radiological excisional biopsy has significant importance for establishing confirmatory diagnosis in suspect neoplastic diseases of the spine.

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