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'WILL MY PARAPLEGIC DOG EVER BE ABLE TO WALK AGAIN?' - A RECORD OF DAY-TO-DAY ASSESSMENT OF THE DEVELOPMENT OF SPINAL WALKING IN A DOG AFTER ACUTE THORACOLUMBAR MYELOPATHY

Introduction

The enigmatic phenomenon of 'spinal walking' has been covered extensively in scientific literature (1-6). Development of spinal walking is sometimes observed in animals after naturally occurring spinal cord injury (SCI) (7). This case describes the clinically followed and videotaped development of spinal walking in a dog after acute thoracolumbar myelopathy.

Case

A six-year-old longhaired Dachshund was presented with an acute onset of ambulatory paraparesis which had progressed to non-ambulatory paraplegia without conscious nociception nor spontaneous micturition over the preceding 48 hours. The dog was diagnosed with an acute, progressive T3-L3 myelopathy (presumptively due to an intervertebral disc herniation at the thoracolumbar junction). Further diagnostics and surgery were declined. Conservative treatment consisted of strict cage confinement for six weeks, bladder management, NSAIDs for 10 days and physiotherapy.

Results and follow-up

The dog was admitted for the first week after onset of paraplegia. Day-to-day assessments were recorded in the patient's log. The owner was involved in the daily routine before discharge and home care was continued. During this time and the next couple of weeks/months, daily (eventually twice weekly) contact with the owner and clinical check-ups revealed signs of development of spinal walking (1-6): increasingly prolonged extensor muscle tonus in a stance posture, protraction and retraction and upon pedal stimulation and spontaneous 'stepping' of pelvic limbs when the dog was supported.

(Videos are shown during presentation)

Conclusions

This case illustrates that effort and commitment of owners of paraplegic dogs could lead to (partial) functional recovery of gait. Central pattern generators, sensory input and spinal reflexes are crucial to the development of spinal walking (1-6). More research is needed to elucidate the (factors involved with) the development of spinal walking and possibly beneficial effects of training, physiotherapy and neuromodulatory drugs on the recovery of canine patients with naturally occurring (incomplete) SCI.

References

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VIDEOS TO BE SHOWN DURING PRESENTATION - SHOWING THE (NEUROLOGICAL EXAMINATION OF THE) PATIENT AT DIFFERENT TIME POINTS FOLLOWING ONSET OF SIGNS