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SUMMARY OF SPINAL TRACTION LITERATURE IN HUMANS

Conservative treatment for cervical disc disease in humans may include cervical traction, analgesic and/or anti-inflammatory medications, and physiotherapy (1, 2). Traction may have an important role in breaking the "cycle of pain" in cervical radiculopathy caused by herniated discs. The cycle begins when nerve roots are entrapped within the intervertebral foramina. Irritated nerves produce a reflex response to the patient's cervical muscles, causing those muscles to contract, further narrowing the formina and increasing neck pain. Intermittent traction helps relieve the inflammatory reaction of nerve roots by improving the circulation and reducing swelling to surrounding tissues. Gentle alternations of stretching and relaxation of soft tissue structures (such as with gentle traction) in the neck prevent the formation of adhesions of the dural sleeve. Human patients with radiculopathy symptoms lasting more than 12 weeks show less favorable improvements with traction, and early intervention is believed to be more successful. Exposure of a herniated disc material in the cervical spine (C/S) to the vascular environment of the epidural space contributes to its resorption and regression. Large extruded discs have wider exposure to resorption mechanisms and tend to regress more rapidly. The response to early therapeutic intervention in cases where there is a large extruded disc is therefore more favorable (1, 3). Treatment protocols that include traction appear to be highly effective in individuals with lumbar pain related to a confirmed herniated lumbar disc with radiculopathy (4). Reports indicate that a treatment protocol which partly included traction as well as other physiotherapy interventions resulted in 90% good or excellent outcome and a in 92% return-to-work rate in 64 patients with CT scan-proven herniated lumbar disc and EMG-proven radiculopathy (5). In another study, lumbar traction was most likely to be beneficial in patients with acute radicular pain of less than 6 weeks duration and concomitant neurological deficit (6).

Conservative treatment (physiotherapy and traction) should always be considered in cases of intervertebral disc disease, even in cases with large-sized disc herniations and/or recurrence of pain (1, 2). Contraindications for traction therapy include infection, neoplasm, osteoporosis, bilateral pars interarticularis defect, grade 2 or higher spondylolisthesis, fractures, and spinal instrumentation (7).

At The Canine Fitness Centre, we have been able to provide pain relief and functional improvement in dogs suffering from neck or back pain with or without mild neurological deficits (conscious proprioception deficits) by using traction protocols in addition to therapeutic modalities.

References:

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