

Received date: 05-08-2023 | Accepted Date: 08-08-2023 | Published Date: 16-10-2023

## What to do in Equine Cervical Compressive Myelopathy (ECCM)?

**Luiz Alberto vasconcellos**

Integrated Equine Medicine Center, Brazil

**Introduction:** By definition, it is a neurological problem in the cervical region in horses that may be due to a stenosis of the cervical medullary canal of traumatic origin, congenital cervical malformation, bone growth problems (osteochondritis dissecans), or poorly consolidated fractures.

Common clinical signs are ataxia (forelimbs and hindlimbs or both), atrophy, asymmetry, loss of muscle strength, decubitus, neonatal mortality, miscarriage, laminitis, hypoesthesia-anesthesia, claudication. Materials and methods. We can use for the evaluation of horses with ECCM, the neurological examination, based on clinical signs, the ethogram (pain evaluation), thermography, radiography and computed tomography, to rule out non-congenital compression malformations (trauma, bone growth disorders and fractures), where we then begin planning the treatment, which may be clinical or corrective surgery (vertebral fusion and laminectomy); the surgical procedures aim at stabilizing the vertebrae or decompressing the medulla by totally or partially removing the bone cap. Vertebral fusion consists of placing, between the dislocated or unstable vertebrae, a metal implant in such a way as to cause arthrodiesis in that vertebral segment, reducing the damage to the spinal cord caused by the erroneous movement of the vertebra, while laminectomy consists of completely removing totally (laminectomy) or partially (hemilaminectomy) the bone cap of the vertebra and thus decompress the spinal cord, both permanent procedures, improving the clinical condition of the horse as well as its return to athletic or reproductive activity Results and Conclusions. Best results are achieved with the techniques described above in horses under the age of 3 years, grade 1-2 ataxia, with the shortest time between diagnosis and treatment and above all, owners with good understanding and understanding of the whole procedure and recovery time, which can reach 12 months.

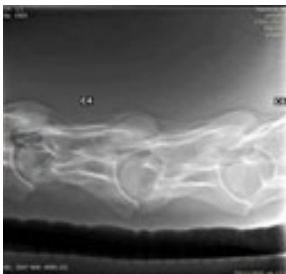


Fig. 1. Radiographic image of a malformation and therefore without surgical indication



Fig. 2. Image of a dislocation, therefore not congenital and with indication for laminectomy

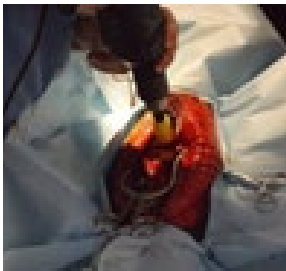


Fig. 3. Joint preparation for implant placement in spinal fusion (cervical arthrodesis)

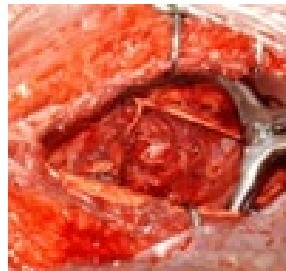


Fig. 4. Removal of the dorsal vertebral lamina for spinal cord decompression in the cervical segment

**Recent Publications:**

1. KONDO T, MASHIMO Y, SATO F, TSUZUKI N, YAMADA K (2022) Investigation of a contributing factor for cervical vertebral stenotic myelopathy using computed tomography for measuring the cervical vertebral volume. *J Vet Med Sci.* 1; 84(8):1084-1087.
2. KONDO T, SATO F, TSUZUKI N, YAMADA K. (2022) Sex differences in cervical spinal cord and spinal canal development in Thoroughbred horses. *J Vet Med Sci.* 21 ;84(10):1363-1367.
3. MAY-DAVIS, S.(2017) Congenital Malformations of the First Sternal Ribs. *Journal of Equine Veterinary Science.* 49. 92-100.
4. NIXON, A.J.; STASHAK, T.S. Dorsal Laminectomy in the Horse I. Review of the Literature and Description of a New Procedure. (1983) *Veterinary Surgery.* 12, 4. 172-176
5. VASCONCELLOS, L. A. S. (2022) *Neurologia e Neurocirurgia Equina: Princípios Gerais.-Edições Universitárias Lusófonas.* Lisboa. Portugal. 303 p.
6. WAGNER, P.C; BAGBY, G.W.; GRANT, B; GALLINA, A; RATZLAFF, M.; SANDE, R. (1979) Surgical Stabilization of the Equine Cervical Spine. *Veterinary Surgery.* 8.7-11.
7. WOODIE B, JOHNSON AL, GRANT B. (2022) Cervical Vertebral Stenotic Myelopathy. *Vet Clin North Am Equine Pract..* 38 2:225-248.

luizalbertovasconcellos@gmail.com