

6. Summary

Literary studies on surgical methods of nervetransplantations on horses suffering from hemiplegia laryngis sinistra

After describing the anatomy and innervation of a horses` larynx, a review of availability and meaning fullness of clinical and pathological-anatomic results concerning the nervus laryngeus recurrens and the musculus cricoarytaenoideus dorsalis in case of a horses` Hemiplegia laryngis sinistra is given.

An explanation of pathophysiological events in denervation and reinnervation of sceletal muscles, ending of axon-sprouting-inhibitor-factor, axon-sprouting-factor, addition and/or hindrance of nerves among each other during reinnervation follows.

The structural pre-condition for a reinnervation of muscles will be thought of while the focus will be on damaged muscles of the larynx.

Characteristics of a matching donor and expected success in reinnervation of atrophical muscles are presented.

A series of surgical techniques to reinnervert the muscles of the larynx of man, dog and horse, as found in literature, is chroniced. Thereby we differenciate between simple sutures, nervimplantations and nerve-muscle-pedicle-grafts.

Closing the literary studies is a discussion of the suitability of the musculus omohyoideus as a donor for a nerve-muscle-pedicle-graft procedure on the musculus cricoarytenoideus dorsalis.

The suitability of different nerves for a physiological regeneration of a horses` larynx functions through surgical procedures means can be judged.

A nerve-muscle-pedicle-graft or a nervimplantation of the ventral branches of the first, or with restrictions the second cervical nerves, are suitable for a horse from an anatomic-surgical point of view, considering the reinnervation of the musculus cricoarytaenoideus dorsalis.