

Neurologic deficits and surgical treatment in a horse affected with internal carotid artery tortuous elongation

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Products

Computed Tomography (CT) for diagnosing and managing vascular anomalies in equine patients.

Hospital / Authors

Astrid B. M. Rijkenhuizen, Claudia Engerand
European Equine Surgeon Consultant, Wijk bij Duurstede, The Netherlands; Pferdeklinik Leichlingen, Leichlingen, Germany

Clinical Background

A 2-year-old Warmblood gelding presented with dysphagia, nasal discharge, and weight loss. CT imaging identified a tortuous, aneurysmal internal carotid artery (ICA) causing cranial nerve compression.

Aim of Study

To investigate the clinical manifestations, diagnosis, and surgical treatment of ICA tortuosity leading to neurological deficits and dysphagia in horses.

Cohort Study

CT imaging was performed on a Warmblood gelding showing persistent dysphagia and respiratory issues. Findings revealed an anti-clockwise looping ICA with a faint soft tissue connection to the guttural pouch, suggesting congenital vascular malformation and nerve compression.

Results

- **CT** identified an **elongated, coiling ICA** in the **left guttural pouch**, causing **compression of cranial nerves IX and X**.
- **Aneurysm formation** was suspected, leading to **nerve dysfunction** and **persistent dysphagia**.
- **Surgical endovascular balloon occlusion** relieved **nerve compression**, allowing for **gradual resolution of clinical signs**.
- **Complete recovery** observed **seven weeks post-surgery**, with the horse gaining **20 kg in weight**.
- **CT proved highly effective** for identifying **vascular anomalies** in equine patients.

Summary

- **CT imaging** enabled **accurate diagnosis** of **ICA tortuosity**, previously undetectable with traditional methods.
- **Cranial nerve compression** from **vascular anomalies** can cause **severe dysphagia**, highlighting **early detection** importance.
- **Endovascular balloon occlusion** alleviated **neurological symptoms**, demonstrating viability for similar cases.
- **CT remains the gold standard** for evaluating **vascular malformations**, facilitating **targeted surgical intervention**.
- **Findings emphasize** the role of **advanced imaging** in equine neurology, improving **diagnostic accuracy and treatment outcomes**.