Reversible congenital bilateral laryngeal paralysis (grade IV) in a foal

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Introduction

Laryngeal paralysis, is in **babies**: The **second most common** neonatal laryngeal abnormality (10-20%) and 22-73% bilateral.
Most often **idiopathic** or due to neurologic disease or trauma.
(Scatolini et al., 2018; Ridgway et al., 2021)

in **dogs**: A well described congenital disease in **multiple breeds** (German shepherds, Siberian Huskies, Bouvier de Flandres, Bull terriers, Dalmatians, Dachshund, Cocker spaniels, Miniature pinchers and Rottweilers) (Kitshoff et al., 2013)

in **foals**: Rarely reported

Diagnosis : History / Laryngoscopy / Laryngeal ultrasound / EMG / CT-MRI

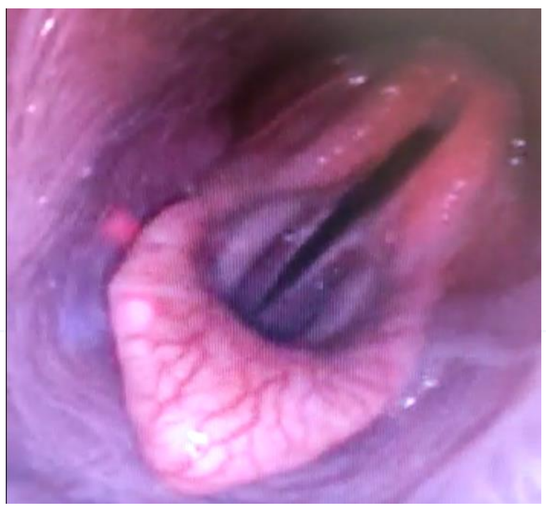

Fig. 2: Bilateral laryngeal paralysis (grade IV) at admission

Fig. 3: At admission, after placement of an endotracheal tube

Methods

This report details the case of a 3-hour old warmblood stallion that presented inspiratory stridor, dyspnea and cyanosis immediately after a mild dystocic birth.
The referring veterinarian placed a nasotracheal tube and send the foal to the clinic.

Results

Fig. 1: The foal shortly after admission.

The foal arrived in lateral **recumbency**, showing a weak suckle reflex, floppy ears and mild signs of dehydration. **Severe respiratory distress** was present without endotracheal tube in place. Other clinical parameters (heart rate, respiratory rate, digestive sounds, rectal temperature, joints, umbilicus) were within normal limits.

Blood analysis revealed increased PCV (0,58), inversed neutrophil:lymphocyte ratio, severe hyperlactatemia (>12 mmol/L), and high serum creatinine (324 µmol/L) and creatin kinase levels (11440 U/L). **Airway endoscopy** showed a bilateral grade IV laryngeal paralysis and a recurrent dorsal displacement of the soft palate without other pharyngeal/laryngeal abnormalities.

No abnormalities were detected on **ultrasonography of the thorax, abdomen and umbilicus and ultrasound/radiography of the larynx**.

A primary diagnosis of **neonatal dysmaturity and/or maladjustment syndrome** was strongly suspected. Nutrititional myodegeneration was not completely ruled out.

A **nasotracheal tube was kept in place and the foal was hospitalized, receiving multiple supportive treatments**, including IV fluid therapy, glucose, DMSO, broad-spectrum antimicrobials, NSAIDs, low-molecular-weight heparin, colostrum, plasma and vitamin E/selenium supplementation.

Clinical evolution was good and laryngeal function recovered progressively, allowing tube removal 24h after arrival and becoming **normal one month** later.

Fig. 4: Persistent right laryngeal paralysis (grade IV) after 10 days

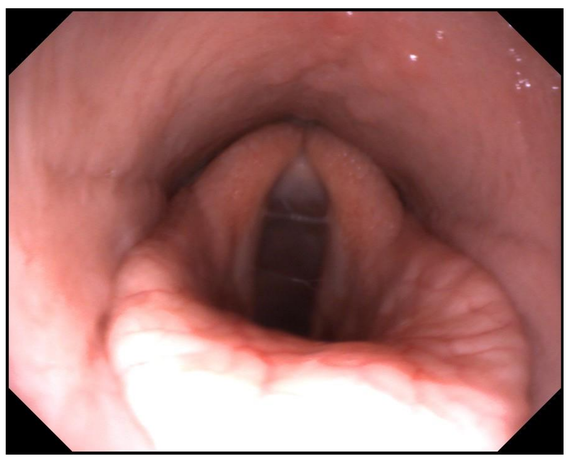

Fig. 5: Complete resolution after 1 month

Conclusion

A grade IV bilateral laryngeal paralysis in a foal
- **may be reversible** without the need for invasive surgical procedures.
- should not necessarily imply a poor vital or sportive prognosis.

Fig. 6: The foal back home, 14 days after admission

References

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