

## **Our objective was to describe the surrounding circumstances, clinical signs, treatment, progression, and outcome of venous air embolism in hospitalized horses” Parkinson et al (2018).**

Abstract:

**BACKGROUND:** Venous air embolism is a potentially life-threatening complication of IV catheter use in horses. Despite widespread anecdotal reports of their occurrence, few cases have been reported in the literature and the prognosis is currently unknown.

**HYPOTHESIS/OBJECTIVES:** Our objective was to describe the surrounding circumstances, clinical signs, treatment, progression, and outcome of venous air embolism in hospitalized horses.

**ANIMALS:** Thirty-two horses with acute onset of compatible clinical signs associated with IV catheter disconnection or damage.

**METHODS:** Multicenter retrospective study. Data extracted from clinical records included signalment, presenting complaint, catheter details, clinical signs, treatments, and outcome.

**RESULTS:** Most cases resulted from extension set disconnection occurring within approximately 24 hours after catheter placement. In fewer horses, extension set damage was cited as a cause. Common clinical signs included tachycardia, tachypnea, recumbency, muscle fasciculations and agitation, with abnormal behavior including kicking and flank biting. Less commonly, pathological arrhythmias or more severe neurologic signs, including blindness and seizures, were noted. Progression was unpredictable, with some affected horses developing delayed-onset neurologic signs. Mortality was 6/32 (19%), including 2 cases of sudden death and other horses euthanized because of persistent neurologic deficits. Negative outcomes were more common in horses with recorded blindness, sweating or recumbency, but blindness resolved in 5/8 affected horses.

**CONCLUSIONS AND CLINICAL IMPORTANCE:** The prognosis for resolution of clinical signs after air embolism is fair, but permanent neurologic deficits or pathologic cardiac arrhythmias can arise. Unpredictable progression warrants close monitoring. Systematic clinic-based surveillance could provide additional useful information to aid prevention.

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Reference:

Parkinson, N.J., McKenzie, H.C., Barton, M.H., Davis, J.L., Dunkel, B., Johnson, A.L. and MacDonald, E.S. (2018) Catheter-associated venous air embolism in hospitalized horses: 32 cases. *Journal of Veterinary Internal Medicine*. February 20th. .

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