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Original Article

Ultrasonographic assessment of the atlanto-occipital space in healthy Thoroughbred foals and Thoroughbred foals with neonatal maladjustment syndrome

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Highlights

- In neonatal foals, evaluation of the central nervous system can be difficult without specialised or invasive techniques.
- Ultrasound could provide a method of evaluating the atlanto-occipital (AO) space in neonatal foals.
- Values for ultrasonographic measurements of the AO space in healthy Thoroughbred foals were determined.
- Healthy foals and foals with neonatal maladjustment syndrome had significant differences on AO ultrasonography.

Abstract

Ultrasonography of the atlanto-occipital (AO) space may be useful as a non-invasive diagnostic tool in neonatal foals. The aims of the study were establish a range of values for ultrasonographic measurements of the AO space in healthy Thoroughbred foals and to compare these variables in healthy foals with foals diagnosed with neonatal maladjustment syndrome (NMS). Ultrasonography of the AO space was performed on 38 healthy Thoroughbred foals and 28 Thoroughbred foals with NMS ≤ 4 days of age. Transverse image spinal cord height (P = 0.001), width (P < 0.001) and spinal cord cross sectional area (P < 0.001), and longitudinal image dorsoventral diameter of the ventral spinal artery, were significantly smaller in foals with NMS than