

TRANS-RECTAL ULTRASONOGRAPHIC EVALUATION OF THE PLACENTA IN ARABIAN AND PONY MARES IN MID-TO-LATE GESTATION

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Placentitis is a common finding (30–40%) of equine abortion. Diagnosis of placentitis may be reached by determination of the combined thickness of the uterus and placenta (CTUP). Normal ranges of CTUP have been established in Thoroughbred, Quarter horses and Standardbred mares. The aim of this study was to determine if smaller size breeds of mares (Arabians and ponies) would have different CTUP.

Normal healthy pregnant mares (11 Arabians and 9 ponies) were used in the experiment. Mares were examined on three separate occasions, 1 month apart. The CTUP was determined at the level of the placento-cervical junction using transrectal ultrasound (7.5 MHz linear transducer). Out of the 20 mares, 18 had normal foals. One pony mare was euthanized due to dystocia, and one Arabian mare had a dysmature foal. All placentas were visually inspected for any gross abnormalities after foaling.

The dorsal measurement of CTUP (mean $\pm$ S.E.M.) at 6, 7, 8, 9 and 10 months of pregnancy was 7.0 ± 1.2 , 6.0 ± 0 , 7.6 ± 1.1 , 8.5 ± 0.6 and 8.5 ± 0.5 mm in Arabians and 5.33 , 5.9 ± 0.5 , 6.8 ± 0.4 , 6.9 ± 0.4 and 7.00 ± 0.7 mm for ponies. The mean ventral measurement of CTUP at the same stages was, respectively, 6.3 ± 5 , 5.00 , 7.7 ± 1.2 , 7.9 ± 0.6 and 8.4 ± 0.5 mm for Arabians and 4.7 , 5.0 ± 0.4 , 5.5 ± 0.3 , 5.5 ± 0.9 and 7.3 ± 1.4 mm for ponies. There was sufficient data for comparison between breeds at 8, 9 and 10 months of gestation and pony mares ventral CTUP measurements were significantly lower compared to Arabians ($p < 0.001$). Dorsal measurements of the CTUP were significantly different from the ventral measurements ($p < 0.05$) at 7 and 9 months with the dorsal measurement being larger. However, there was not a significant difference seen at 8 and 10 months.

These preliminary results show that CTUP in Arabians mares is similar to that reported for Quarter Horses and Thoroughbreds. However, pony mares tend to have smaller measurements. In conclusion, the guidelines published for larger breeds of horses can be utilized clinically in smaller breeds of mares with respect to diagnosis of placental disorders. More measurements are being conducted in ponies and American miniature horses.

Keywords: Breed; Equine; Placentitis; CTUP; Placenta