

ERG EVALUATION IN EQUIDAE

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Purpose

Develop an electroretinogram procedure for the retina study in horses and donkeys

Methods

Ten equines, five horses and five donkeys, for a total of twenty eyes, admitted at the Veterinary Hospital - School of Veterinary Medicine Camerino, for routine procedures were included in this study. All animals included, were without ophthalmic diseases. After the agreement of the owners, all animals were subjected to electroretinography (ERG) examination by Veterinary Retiport 32 device after anesthesia. Photopic ERG was performed to find the I-max value and Flicker stimulation. Scotopic ERG was performed to highlight the scotopic retinal adaptation. All data obtained were submitted to statistical evaluation.

Results

All results obtained in photopic condition showed greater variability of waves amplitudes compared to the variability of the culmination time. The donkeys have a a-wave and b-wave amplitude value greater than the horses. In scotopic condition in donkeys and horses B-wave amplitude value grow during t0 and t20, however, without significant differences in both groups.

Conclusion

Despite the number of animals per group is small, the analysis of ERG parameters has allowed to show that there are differences between the two groups only for what concerns the photopic evaluation. To the author knowledge, this project provided the first electroretinogram evaluation in healthy donkeys by ERG full field in animals maintained in anesthesia.