CORELATIONS BETWEEN THE BODY TEMPERATURE FLUCTUATION AND THE PREDICTION OF OVULATION IN MARES

Badea Ruxandra

Faculty of Veterinary Medicine Bucharest- Splaiul Independentei 109, Bucharest, ROMANIA, ruxibadea@yahoo.com

Key words: temperature, mare, prediction, ovulation

SUMMARY

Due to the difficulties involved in the prediction of ovulation in mares, which ovulate before the end of estrus, a more efficient, less invasive method that could reduce the need for repeated teasing and ultrasonography is needed. It is possible that the conventional methods (palpation, ultrasonography, teasing) currently used are the most effective when predicting ovulation in the mare. The evaluation of the body temperature curve (temperature fluctuations) in the study of the prediction of ovulation is used successfully for humans and there are also some articles about it for dairy cattle and rats. The current study is presenting some observations about the fluctuation of body temperature around the moment of ovulation in mares.

The current study utilized four mature cycling Romanian Sport Horse mares, and was conducted from July-August 2007. Observations were recorded from the first day mares exhibited signs of behavioral estrus through day three after the end of the estrus once daily. Beginning with the moment when an ovulatory follicle (>35mm) was detected using ultrasonography the mare's follicle size and temperature were recorded approximately every six hours until ovulation.

All four mares were palpated every other day during estrus to determine the presence of an ovulatory follicle (>35mm). Ovulation was established through palpation by the presence of an ovulation depression or corpus hemorrhagicum on the ovary hosting the ovulatory follicle. The rectal temperatures were recorded using a veterinary digital thermometer four times daily.

Differences in the fluctuation of the rectal temperature were found in relation to the presence of an ovulatory follicle of greater than 35mm compared with the absence of it (plus 0.1 °C -0.5 °C), but there were no changes 24 hr prior to ovulation that could be used to predict ovulation (a mean of 37.7 °C pre-ovulation and post-ovulation).