Relationship among characteristics of the wave-like pattern of Oovarian follicular development in white lamphun cows

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Abstrak

ABSTRAK
The aims of the current study were to characterize the pattern of ovarian follicular wave and to evaluate the relationships among length of interovulatory interval (IOI), number of follicular wave, duration of follicular growth phase, and lifespan of corpus luteum (CL) in White Lamphun cows. The dominate follicle (DF) and CL of ovulated White Lamphun cows (n=16) were scanned with an ultrasound machine and blood samples were collected from first ovulation until second ovulation. Cows with 2 follicular waves (2-wave cows) tended to have a shorter (P=0.063) length of IOI than cows with 3 follicular waves (3-wave cows). Prolonged duration of DF growth phase in first follicular wave (Wave 1) was observed more often in 2-wave cows than in 3-wave cows (P<0.05). At the end of DF growth phase in Wave 1, the concentration of progesterone was greater in 2-wave cows than in 3 wave cows (P<0.05). The 2-wave cows had a shorter length of luteal phase than 3-wave cows (P<0.05). The length of IOI was positively correlated with number of follicular wave (P<0.05) and length of luteal phase (P<0.01) but was negatively related with duration of DF growth phase in Wave 1 (P<0.05). These results demonstrate that short length of IOI in 2-wave cows is due to extended duration of DF growth phase in Wave 1 and short lifespan of CL. These data emphasized that length of IOI increased linearly with high number of follicular wave and extended lifespan of CL but decreased linearly with prolonged duration of DF growth phase in Wave 1.