

INTISARI

KONDISI OVARIUM DAN KADAR HORMON ESTRADIOL PADA SAPI PERAH PASCA KESEMBUHAN PENYAKIT MULUT DAN KUKU

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Penyakit Mulut dan Kuku (PMK) dapat menurunkan produktivitas reproduksi. Sapi perah pasca PMK dinyatakan sembuh apabila performa reproduksinya telah kembali normal. Performa reproduksi baik apabila fungsi ovarium, kadar estradiol, dan kualitas estrus normal. Tujuan penelitian ini adalah memberikan gambaran kondisi ovarium, kadar estradiol, dan kualitas estrus pada sapi perah yang pernah terinfeksi oleh virus PMK di Koperasi Samesta dan peternakan rakyat di Klaten, Jawa Tengah. Penelitian ini merupakan *purposive sampling* pada 37 ekor sapi perah dengan riwayat terinfeksi PMK, umur 3-7 tahun, memiliki Skor Kondisi Tubuh (SKT) 2,5-3,5. Ovarium sapi perah diperiksa dengan USG dan diukur diameter folikelnya. Pengambilan darah dilakukan melalui vena *jugularis* atau vena *coccygeal* untuk pemeriksaan kadar estradiol dengan ELISA. Data dianalisis menggunakan IBM SPSS dengan uji Anova *One-way* dan Uji Korelasi. Hasil penelitian menunjukkan rata-rata diameter folikel yaitu 1.39 ± 0.30 cm. Pada perbandingan rata-rata diameter folikel pada tiga kategori menunjukkan adanya pengaruh signifikan ($p < 0.05$). Hasil analisis kadar estradiol menunjukkan rata-rata kadar estradiol 74.42 ± 49.09 pg/mL. Perbandingan rata-rata kadar estradiol pada ketiga kategori menunjukkan adanya perbedaan signifikan ($p < 0.05$). Uji korelasi menunjukkan adanya korelasi kuat dan positif antara diameter folikel dengan kadar estradiol, serta kadar estradiol dengan kualitas estrus. Kesimpulan penelitian ini adalah kondisi ukuran folikel ovarium, kadar estradiol, kualitas estrus saat estrus pada sapi perah pasca PMK telah kembali normal. Perkembangan folikel ovarium dapat memengaruhi pengeluaran kadar estradiol, serta kadar hormon estradiol memengaruhi kualitas estrus. Fisiologis reproduksi sapi perah dibawah nilai standar menunjukkan belum kembalinya kondisi reproduksi sapi perah pasca PMK.

Kata Kunci: Pasca PMK, sapi perah, ovarium, hormon estradiol

ABSTRACT

OVARIUM CONDITIONS AND ESTRADIOL HORMONE LEVELS IN CATTLE POST RECUREMENT OF FOOT-AND-MOUTH DISEASE

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Foot and Mouth Disease (FMD) can reduce reproductive productivity. Post FMD cows are declared cured if their reproductive performance has returned to normal. Reproductive performance is good if ovarian function, estradiol levels and estrus quality are normal. This study aims to provide an overview of the condition of the ovaries, estradiol levels and quality of estrus in dairy cows that have been infected with the FMD virus in Samesta Cooperative and smallholder farms in Klaten, Central Java. This study used a purposive sampling method on 37 dairy cows with a history of FMD infection, aged 3-7 years, with a Body Condition Score (BCS) of 2,5-3,5. The cow's ovaries are examined by ultrasound and the diameter of the follicles is measured. Blood was drawn via the jugular vein and coccygeal vein to check estradiol levels using ELISA. Data were analyzed using IBM SPSS with *One-way* Anova test and Correlation Test. The research results showed that the average follicle diameter was 1.39 ± 0.30 cm. A comparison of the average follicle diameters in the three categories showed a significant effect ($p < 0.05$). The results of the analysis of estradiol levels showed an average estradiol level is 74.42 ± 49.09 pg/mL. Comparison of the average estradiol levels in the three categories showed a significant effect ($p < 0.05$). The correlation test shows that there is a strong and positive correlation between follicle diameter with estradiol levels and estradiol levels with quality of estrus. The conclusion of this study is that the condition of ovarian follicle size and estradiol levels during estrus in dairy cows after FMD has returned to normal. The development of ovarian follicles can affect the release of estradiol levels, and the levels of the hormone estradiol affect the quality of estrus. The reproductive physiology of dairy cows is below standard values, indicating that the reproductive condition of dairy cows has not returned after FMD.

Keywords: Post FMD, dairy cows, follicle ovary, hormone estradiol