

INTISARI

Perbandingan Efikasi Protokol Sinkronisasi Estrus Menggunakan Spons MPA (*Medroxyprogesteron Acetate*) dan CIDR (*Controlled Internal Drug Release*) terhadap Ekspresi Estrus dan Tingkat Kebuntingan pada Kambing Peranakan Etawa

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Sinkronisasi estrus merupakan salah satu metode untuk menyeragamkan estrus pada kelompok kambing betina sehingga mempermudah deteksi estrus dan inseminasi buatan. Penelitian ini bertujuan untuk membandingkan tingkat keberhasilan sinkronisasi estrus pada kambing PE menggunakan Spons MPA dan CIDR. Penelitian ini menggunakan 20 ekor kambing PE betina dengan umur 1,5- 2 tahun, pernah beranak minimal 1 kali, dan berat badan 30-45 Kg. Kambing dibagi secara acak dalam 2 kelompok perlakuan. Kelompok 1 (P1) sinkronisasi estrus dengan metode Spons MPA dan kelompok 2 (P2) dengan CIDR selama 16 hari. Pengamatan estrus dilakukan dengan interval 6 jam selama 42 jam setelah pelepasan Spons MPA dan CIDR. Pengamatan estrus dilakukan secara visual berdasarkan perubahan fisik berupa perubahan vulva, adanya lendir dan pengamatan tingkah laku, kualitas estrus, onset estrus, durasi estrus, dan daya retensi. Pemeriksaan kebuntingan dilakukan dengan USG, selama perlakuan dilakukan pengamatan terhadap daya retensi dan efek terhadap pemasangan Spons MPA. IB dilakukan 42 jam setelah pelepasan Spons MPA dan CIDR secara *intracervikal* dengan semen beku. Data penelitian ini akan diolah menggunakan uji *T-Test* pada SPSS 26.0. Hasil analisis statistik menunjukkan bahwa Spons MPA dan CIDR memberikan pengaruh signifikan ($P < 0.05$) terhadap onset estrus dan durasi estrus, namun tidak menunjukkan perbedaan yang nyata terhadap daya retensi, respon estrus, perubahan vulva, sekresi lendir, serta kualitas estrus. Secara deskriptif, persentase kebuntingan pada perlakuan Spons MPA sebesar 30% dan perlakuan CIDR sebesar 40%, yang menunjukkan bahwa efektivitas reproduksi yang dihasilkan sebanding antara metode Spons MPA dan CIDR. Simpulan penelitian ini, penggunaan Spons MPA dapat direkomendasikan sebagai alternatif metode sinkronisasi estrus yang lebih ekonomis, efektif serta mudah diaplikasikan, dan tetap mampu menghasilkan kualitas estrus yang baik.

Kata kunci: CIDR, Ekspresi Estrus, Kambing Peranakan Etawa, Sinkronisasi Estrus, Spons MPA.

ABSTRACT

Comparison of Estrus Synchronization Protocols Using Medroxyprogesteron Acetate (MPA) *Sponge* And Controlled Internal Drug Release (CIDR) On Estrus Expression And Conception Rate In Peranakan Etawa Does

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Estrus synchronization is a method used to standardize the occurrence of estrus in groups of does, thereby facilitating estrus detection and artificial insemination. The objective of this study was to comparatively evaluate the efficacy of estrus synchronization protocols based on (MPA) Medroxyprogesterone Acetate sponges and (CIDR) Controlled Internal Drug Release devices in PE does. The study involved 20 PE does aged 1.5–2 years, with a history of at least one previous parturition and body weights ranging from 30 to 45 kg. The does were randomly allocated into two treatment groups. Group P1 received estrus synchronization using MPA sponges, while Group P2 was subjected to estrus synchronization using CIDR devices for a period of 16 days. Estrus observations were performed at 6-hour intervals for a total duration of 42 hours following the removal of the MPA sponge and CIDR device. Estrus detection was conducted through visual assessment of physiological and behavioral indicators, including changes in vulvar morphology, the presence and characteristics of cervical mucus discharge, and estrus-related behaviors. Parameters evaluated comprised estrus response, estrus quality, onset of estrus, duration of estrus, and retention rate. Pregnancy diagnosis was performed using ultrasonography. Additionally, during the treatment period, observations were conducted to evaluate the retention rate of the intravaginal devices as well as any local effects associated with the application of the MPA sponge. Artificial insemination was conducted 42 hours after the removal of the MPA sponge and CIDR using the intracervical technique with frozen semen. Data were analyzed using an independent samples *t*-test in SPSS version 26.0. The statistical analysis revealed that both MPA sponges and CIDR devices had a significant effect ($P < 0.05$) on the onset and duration of estrus. However, no significant differences were observed between treatments with respect to device retention rate, estrus response, vulvar changes, mucus secretion, or estrus quality. Descriptive analysis showed that the pregnancy rate was 30% in the MPA sponge group and 40% in the CIDR group, indicating comparable reproductive performance between the two estrus synchronization methods. In conclusion the use of MPA intravaginal sponges may be recommended as an alternative estrus synchronization method due to their cost-effectiveness, equivalent reproductive performance, ease of application, and capacity to induce satisfactory estrus quality.

Keywords: CIDR, Estrus Expression, Estrus Synchronization, MPA Sponge, Peranakan Etawa Does