

THE CLINICAL APPLICATIONS OF SOME REPRODUCTIVE HORMONES IN TREATMENT OF SOME REPRODUCTIVE DISORDERS AND THE EFFECT OF THIS TREATMENT ON THE ESTRUS ONSET IN THE COWS IN IRAQ

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ABSTRACT : This study was designed to evaluate efficacy of different therapeutic protocols of hormones and their influence on the reproductive performance in cows. The current study was conducted in the College of Vet. Medicine, University of Diyala, and extended from 1/10/2018 until 1/2/2019 and includes 32 multiparous cows. The number of cows suffering inactive ovaries was 16(50%) (Gr-1) were allocated to two equal subgroup (Gr- A and Gr- B), one of which was applied Folligon for one time and other Receptal treatment. The time of estrus onset for each subgroup were (18-23)day and (28-32)day, respectively. There was no significant difference for these two groups of hormonal treatment in terms of estrus onset at ($P<0.05$). Seven cows (21.88%) (Gr-2) suffering ovarian follicular cysts were treated with Chorulon, for one time and the estrus onset and inseminated artificially about 23-28 days after treatment. Two cows(6.25%) (Gr-3) experiencing ovarian luteal cyst treated with Estrumate ($\text{PGF}^2\alpha$), for one time and came to estrus and inseminated artificially after 29-32 days of treatment, without significant difference for the two categories of hormonal treatment in terms of estrus onset at ($P<0.05$). Five cows (15.63%) (Gr-4) have retained placenta and were injected with Estrumate for one time, three cows were recovered after 3-5 days of treatment and came to estrus and artificially inseminated about 50-60 days of treatment. Whilst other tow cows did not respond to Estrumate and treated manually removal of fetal membranes and insertion intrauterine tablets of oxytetracycline, with oxytetracycline solution (20%) injection in addition to estradiol (estrogen) intramuscularly for one time after manual removal, those cows came to estrus and with complete recovery and inseminated artificially after 72 days of treatment. There was no significant difference for these hormonal treated cows in terms of the onset of estrus at ($P<0.05$). Tow cows (6.25%) (Gr-5) had pyometra and treated with Estrumate for one time with intrauterine therapy of oxytetracycline (10%), three times with 7 days apart. These came to estrus with good recovery and inseminated artificially about 55-60 days of treatment and not differed significantly from the retained placenta treated cows in terms of the onset of estrus. There was significant difference among the groups of treated cows with Folligon, Receptal, Chorulon, Estrumate and groups of treated cows with retained placenta, pyometra in terms of the onset of estrus at ($P<0.05$). It can be concluded that these hormones investigated in the study were effective to treat the reproductive disorders encountered with various results, besides to a variation in the onset of estrus. This variation may attributed to many reasons like the origin of pharmacologic product and the variable responses of treated cows involved in this study to a pharmacologic product.

Key words : Reproductive disorders, hormonal therapy, multiparous cows, ultrasound.

INTRODUCTION

Gonadorelin (GnRH), which is produced endogenously by the hypothalamus and causes the release of FSH and LH by anterior pituitary. GnRH is prepared synthetically. Gonadorelin is used to treat ovarian follicular cyst and inactive ovaries in dairy cattle. It has also been used in protocols of Estrous synchronization (Wanamaker, 2004; Hafez and Hafez, 2000).

FSH (Follicle Stimulating Hormone), which is released endogenously by the anterior pituitary gland causes growth and maturation of the ovarian follicles in females. FSH may be obtained from pituitary glands of slaughtered

animals (FSH-p) and from the serum of pregnant mares (PMSG) (FSH like hormone) between 40th and 140th day of pregnancy. FSH is used in veterinary medicine to treat inactive ovaries and to induce superovulation and for out-of season breeding (in seasonal breeders) (Noakes *et al*, 2001; Andrews *et al*, 2004).

LH (luteinizing hormone) is also released by anterior pituitary, and causes ovulation in females. LH may be prepared from the pituitary glands of slaughtered animals or obtained from urine of pregnant women in the form of human chorionic gonadotropin (hCG), hCG is used to treat ovarian follicular cyst (nymphomania) and also ovulation