The 1st International Conference on New Ideas in Agriculture
Islamic Azad University Khorasgan Branch
26-27 Jan. 2014, Isfahan, Iran

CHANGE IN MICE SEXUAL HORMONES BY FLUNIXIN INJECTION

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INTRODUCTION

Considering the sensitively of reproduction, mentioned factors have caused different injuries on male and female sexual systems such as infertility and low fertility which are various degree of sexual system failures. Infertility has affected 15% of world couples which 40-50% of infertilities are because of male factors. Flunixin is a potent non steroidal, anti-inflammatory agent that is used as an analgesic and antipyretic drug in veterinary. Considering the frequent use of this drug in recent years this study was conducted to investigate the effects of this drug on pituitary–gonadal axis of mice. Results of this study can be used highly for better use of this drug and saving sexual power of male sex.

MATERIALS AND METHODS

Five experimental groups with eight male mice in each group were studied as control, Placebo, and three treatment groups. Flunixin was injected in 0.5, 1, and 1.5 mg/kg in peritoneum in a twenty-day period. Control group didn't receive any injection and Placebo group received only physiological serum. Completely Randomized Factorial Designs was applied to test the significance of treatments and means were compared using Duncan's multiple range test at P = 0.05. Effects of flunixin meglumine on FSH, LH and testosterone concentration were analyzed using the PROC MIXED procedure (SAS Inst. Inc., Cary, NC) with a repeated measures model that included the effects of flunixin meglumine.

RESULTS AND DISCUSSION

According to results, FSH and LH concentrations were increased significantly ($p<0.05$) but testosterone was not changed. Results show that flunixin can affect sexual power of male sex by increasing hormones of hypophysis-testicle axis. In conclusion, the best treatment to enhance FSH and LH concentration of mice, was the exact 1.5 mg/kg flunixin. This treatment can be proposed as additional substance for FSH and LH discharge increasment. Nonsteroidal anti-inflammatory drugs, such as flunixin meglumine (FM), inhibit PGF2α synthesis by inhibiting the COX-2 enzyme, and have positive effects on pregnancy rates when administered between Days 14 and 17 post-AI (Merrill et al., 2007; Guzeloglu et al., 2007).

Keywords: flunixin, testosterone, FSH, LH, mice

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