

Effects of Injection of eCG and Oxytocin on Semen Characteristics of Zel Rams in Nonbreeding Season

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Abstract : Many previous studies have reported that eCG was effective for completing spermatogenesis. In mice, eCG increased testes weight. In addition, Oxytocin (OT) was important in sperm transition and sperm motility in domestic animals. Peripheral circulation of OT also, was increased during sex incitement and ejaculation. The objective of this study was to investigate the effect of IM injection of eCG and OT on semen characteristics in Zel rams in out of breeding season. Eighteen 3-year-old Zel adult rams were randomly divided into five equal groups (control and four treatment groups). 0.9% NaCl (1 ml) was injected IM into each ram in the control group, whereas eCG was administered IM at a single dose of 400 IU and 600 IU to each ram in the two eCG treatment groups and OT was administered IM at a single dose of 5 IU and 10 IU to each ram in the other two OT treatment groups. Semen samples were taken by an electroejaculator from all rams 10 min after the IM injection of 0.9% NaCl, eCG, or OT. eCG did not alter semen volume, and OT did not alter sperm motility or abnormal sperm, in comparison to the control values. Mass activity, sperm motility and total sperm number increased significantly in eCG group compared to the control group; and semen volume, mass activity, total sperm number of the OT treatment groups increased significantly compared to the control group. Exogenous 600 IU eCG and 10 IU OT increase mass activity, total sperm number, lived sperm and sperm concentration in Zel rams.

Keywords : eCG, oxytocine, semen characteristics, Zel Ram, nonbreeding season

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