

Veterinary World, Vol.1(8): 243-244

Influence of Serum and Hormones on In vitro maturation of Buffalo Oocytes

S.A. Adlak, K.P. Khillare, C.H. Pawshe and S.W. Mude

Department of Animal Reproduction
Post Graduate Institute of Veterinary and Animal Sciences, Akola 444104.

Abstract

The influence of different combinations of protein supplements in the presence of different concentrations of commercially available FSH (FSH Folltropin-V) and steroids (17- β oestradiol) were studied in order to establish optimal condition for in vitro maturation of buffalo oocytes. The isolated 10 immature oocytes cultured in Ham's F-10 + sera (buffalo oestrus serum or fetal bovine serum) + different concentrations of FSH i.e. 1, 10 and 20 $\mu\text{g/ml}$ and oestradiol at 39°C in 5% CO₂ in air and 95% relative humidity and incubated for 24 hrs. The oocytes matured in presence of 10% BES and 10% FBS showed higher maturation rate than the medium alone. The addition of different concentrations of FSH and oestradiol (E2) in the presence of serum to medium showed improved maturation rate over that serum alone. However higher maturation rate (71.05%) was observed in Ham's F-10 + FBS + E2 + 10 $\mu\text{g/ml}$ FSH than Ham's F-10 + BES + E2 + 10 $\mu\text{g/ml}$ FSH i.e. 51.16%, but no significant differences was observed. In the present study, FBS and 10 $\mu\text{g/ml}$ concentration of commercially available crude FSH in the presence of oestradiol and suitable protein supplement found to be most suitable medium for maturation of buffalo oocytes.

Keywords : Nuclear maturation, fetal bovine serum, germinal vesicle, metaphase.