

Superovulation in Rabbits by Single Injection of FSH Dissolved in Polyvinylpyrrolidone

Chang-Yong Choe¹, Tae-Young Kang¹, Xi-Jun Yin¹, Da-Won Kang², Ran-Jo Ha², Hyo-Jong Lee¹, Choong-Saeng Park², Sang-Yong Choe¹.

¹*College of Veterinary Medicine, Institute of Animal Medicine, Gyeongsang National University*

²*College of Agriculture, Gyeongsang National University*

This study was undertaken to determine whether a single injection of porcine follicular stimulating hormone (pFSH) would induce a superovulatory response in rabbits. Group 1 rabbits were given multiple intramuscular injections of Folltropin-V[®] every 12 hours for 3 days for a total of 40mg. Group 2 rabbits were given a single subcutaneous injections of Folltropin-V[®] 40mg dissolved in 10% polyvinylpyrrolidone (PVP). Group 3 rabbits were given a single subcutaneous injections of Folltropin-V[®] 40mg dissolved in 25% PVP. At 20 hours after hCG injection and mating, the number of ovulation points and fertilized ova were counted. Also the embryos were collected by retrograde flushing of the oviducts with D-PBS.

The mean number of ovulation points and fertilized ova collected were 44.8 and 34.1 in Group 1, 39.2 and 21.4 in Group 2, and 33.2 and 28.4 in Group 3, respectively.

A single subcutaneous injection of pFSH dissolved in 25% PVP resulted in the number of ovulation points and fertilized ova as good as that of more common treatment with multiple injection of pFSH. The use of PVP as an FSH solvent can reduce the frequency of injections for superovulation induction to one sixth and lead to the growth of follicles comparable to the result of conventional or currently practiced six injection in rabbits.