Diagnosis of Ovarian Follicular Cyst in a Beetal Goat by Ultrasonography and Treatment with GnRH-PGF$_{2\alpha}$

Muhammad Irfan-ur-Rehman Khan[1]*, Muhammad Ejaz-ul-Haq[1], Abdul Rehman[1], Imran Mohsin[2], Mubbashar Hassan[1], Nasim Ahmad[1] and Rehana Kausar[3]

[1]Department of Theriogenology; [2]Department of Livestock Production, University of Veterinary and Animal Sciences, Lahore, Pakistan; [3]Principal Scientist, Animal Reproductive Endocrinology Group, Animal Science Division, Nuclear Institute for Agriculture and Biology, Faisalabad, Pakistan
*Corresponding author: irfan.khan@uvas.edu.pk

Abstract

A one year old healthy Beetal goat with nymphomaniac signs was diagnosed for ovarian follicular cyst via transrectal ultrasonography. Two ovarian scans at 10-days interval revealed an anechoic mass >10 mm in diameter with thin echogenic wall on the right ovary. The follicular cyst was treated with single dose of GnRH (50µg; i.m., Day 0), followed by a luteolytic dose of PGF$_{2\alpha}$ (0.075 mg, i.m.) on Day 11. The efficacy of the treatment was determined by monitoring ultrasonographic changes in follicular cyst on Days 0, 11 and 16, and by measuring plasma estradiol and progesterone concentrations on Days 0, 3, 6, 7, 11, 13 and 16. After GnRH treatment, Latinization of follicular cyst occurred and plasma progesterone concentration increased in tandem with the decrease in estradiol concentration. After PGF$_{2\alpha}$ treatment, luteinized cyst regressed and plasma progesterone concentration decreased while of estradiol increased. The goat expressed estrus 84 h after PGF$_{2\alpha}$. In conclusion, the combination of GnRH-PGF$_{2\alpha}$ is an effective therapy for a follicular cyst in Beetal goat.

Key words: Beetal goat, Estradiol, Follicular cyst, Progesterone, Ultrasonography