

Ovarian Cysts in Bovines

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ARTICLE ID: 051

Ovarian dysfunction is a major cause of infertility and sterility in bovines causing high economic losses. The incidence of ovarian cysts ranges from 0.5% to 30%. Cystic ovarian disease (COD) in bovine is defined as the presence of large follicle-like structure on one of the ovaries having a diameter of 2.5cm or greater, that persists for at least 10days, in the absence of luteal tissue.

Many factors are associated with COD, which includes, uterine infections and endometritis, high milk production, a severe negative energy balance and ketosis, periparturient problems, genetic predisposition, season, and nutritional disorders suggests that, COD results from the failure of the pituitary gland to release sufficient amounts of LH to induce ovulation.

The COD in bovines includes follicular cysts, luteal cyst, cystic corpus luteum, cystic rete ovarii, inclusion cysts and parovarian cyst.

Follicularcysts:

The traditionally accepted definition of follicular cyst is that they are “follicular structures of 2.5 cm or larger that persist for a variable period in the absence of a corpus luteum”. They are characterized by thin walls and produce very small amounts of progesterone. Occasionally, a persistent condition can lead to increased testosterone levels, causing some cows to exhibit masculine aggressive and sexual behavior. However, most cystic cows will remain in anestrous as long as the condition persists.

Luteal cyst:

Luteal cystare characterized by enlarged ovaries with one or more cysts, the walls of which are thicker than those of follicular cysts because of a lining of luteal tissue. Luteal cysts persists over long periods of time in comparison to follicular cysts.

Cysticcorpus luteum

It is defined as a “luteal tissue initiating from a corpus hemorrhagicum and containing fluid in a central cavity greater than 7 mm in diameter”.

Parovarian cysts:

Parovarian cysts are remnants of the mesonephric ducts which are occasionally found around the ovary and fallopian tubes, attached in the broad ligaments of cows and buffaloes. The cysts may vary in size from 1 to 5 cm in diameter and are usually round or oval in shape. They are of little significance in relation to infertility.

Diagnostic approaches

Most functional ovarian disorders can be diagnosed by history and clinical signs, transrectal palpation and transrectal ultrasonography and plasma or milk progesterone assay.

Treatment

1. GnRH alone
2. GnRH analogs
3. GnRH+ PGF 2α combination
4. GnRH+CIDR
5. hCG
6. Manual rupture
7. Ovsynch protocol
8. PGF 2α
9. Progesterone and progesterone implants
10. Spontaneous recovery