

Anestrus

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Failure of estrus cycles in poly-estrus farm animals is known as **anestrus**.

□ Physiological Anestrus

- Post-partum anestrus
- Pre-Pubertal anestrus
- Pregnancy

Classification of Anestrus

Class I (Functional): These cases have normal functional corpus luteum

(i) Anestrus due to Pregnancy

(ii) Persistent Corpus Luteum

a) Associated with Uterine Pathology- Pyometra, Mummification, Maceration

b) Associated with Early Embryonic Death- PCL

(iii) Silent Estrus

(iv) Un-Observed Estrus

Class II (True Anestrus): This is associated with small inactive ovaries with no palpable corpus luteum per rectum

1. Apparent anestrus

2. Anestrus secondary to debility or weight loss

a) Low plane of nutrition-

- ❑ Low TDN and DCP in ration
- ❑ Phosphorus Deficiency
- ❑ Iron, Copper and Cobalt deficiency and anemia

b) Chronic Debilitating Disease- Tuberculosis, Paratuberculosis, Actinomycosis, Haemo-protozoan infection like Theileriosis and Anaplasmosis

c) Senility

d) Seasonal Influence- Winter anestrus in mares and queens, summer anestrus in buffaloes

3. Cystic Ovaries

4. Miscellaneous- Post-partum, Freemartinism, Congenital bilateral ovarian hypoplasia, Granulosa Cell Tumor

Diagnosis

Examination should be made twice at 10 days interval

External Genitalia- Small Vulva, Vulvar lips dry and pale

Rectal Palpation- Flaccid Uterine Horns, Smooth Ovaries/
Corpus Luteum

Progesterone Assay- < 0.5 ng/ml measured twice at ten
days interval

Haemato-Biochemistry- Hb%, Phosphorus, AST,
Albumin, Cholesterol



Anestrus ovaries

*Normal symmetrical ovaries showing
no activity (20 x 15 x 15 mm).*

Treatment

Cattle

Functional Anestrus

- ❖ Prostaglandin
- ❖ Cloprostenol- 500 micro (2 ml) gram intra-muscular
Pragma[®], Intas (250 µg/ml)
Pregova[®], Virbac
- ❖ Dinoprost Tromethamine- 25 mg (5 ml) intra-muscular
- ❖ Lutalyse[®], Pfizer (5 mg/ml)

True Anestrus

- ▶ Deworming

Albendazole (Albomar[®], Virbac) 3 gm bolus twice at 14 days interval

- ▶ Treatment of Hemo-protozoan Infection (if any)

- ▶ Correction of Anemia with Hematinic Preparation

Sharkoferol Vet[®], Alembic

- ▶ Vitamin Mineral Mixture- 50 grams mix with feed per animal

Chelated Agrimin Forte[®], Virbac

Minfa Gold[®], Intas

- ▶ Proper Balance Ration (TDN & DCP as per requirement)
- ▶ Herbal Formulations Effective Against True Anestrus
- ▶ Himfartin Vet[®] (Himalaya), Prajana HS[®] (Indian Herbs), Sajani[®] (Zydus), Janova[®] (Ayurved)
- ▶ Dose
- ▶ Cattle and Buffaloes: 3 caps/day for 2 days, repeat after 11 days if not in heat
- ▶ Sheep, Goats, Bitch, Sows: 2 caps/day for 2 days, repeat after 11 days if not in heat

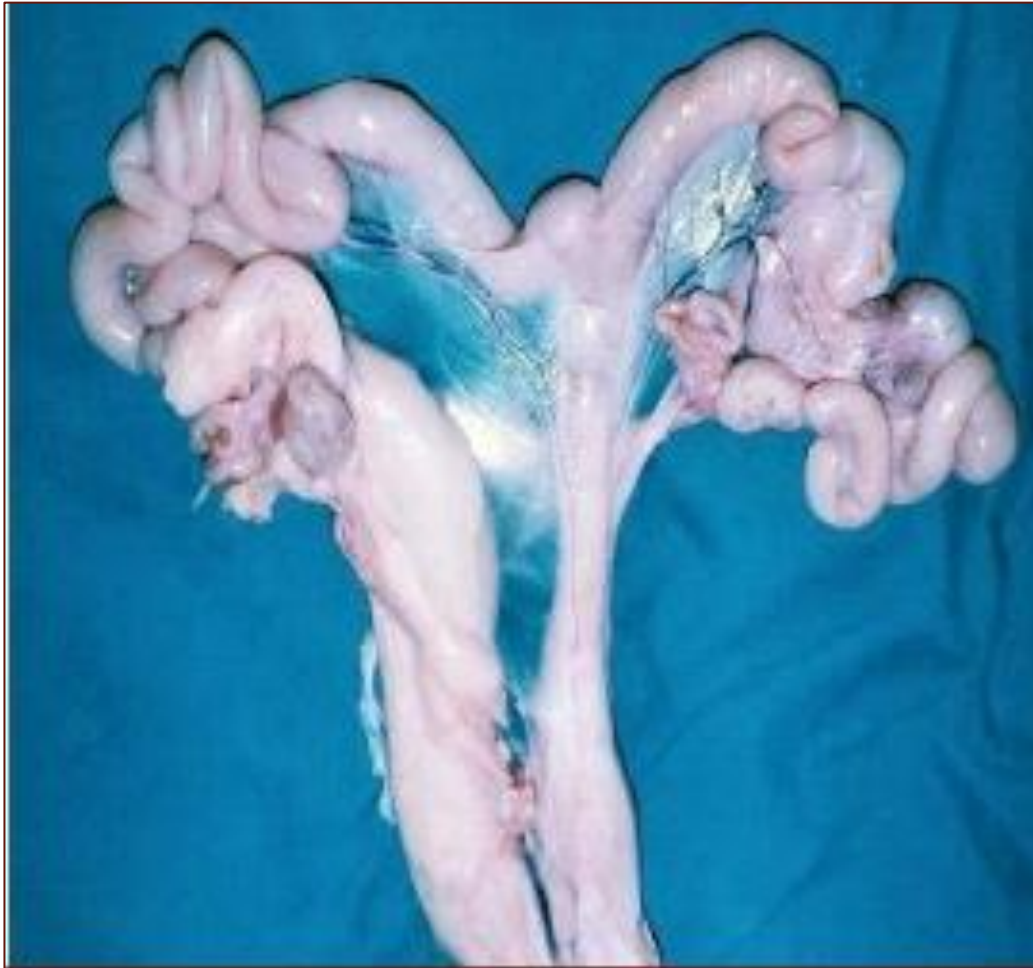
- ▶ If the above treatment fails then hormonal treatment should be initiated
- ▶ Clomiphene Citrate 300 mg (Ovulanta Kit[®], Vet Mankind)
- ▶ Cattle, Buffaloes, Sow: 1-2 tablets orally for 5 days
- ▶ Pregnant Mare Serum Gonadotropin (Folligon[®], MSD) 1000 IU intra-muscular followed by
- ▶ Buserelin Acetate (Gynarich[®], Intas) 20 micro-gram intra-muscular on appearance of estrus symptoms

Anestrus in Goats

- ▶ Intra-muscular injection of 250 μ g cloprostenol sodium
- ▶ Deworming
- ▶ Flushing along with vitamin mineral supplementation
- ▶ *In Case of No Response*
- ▶ 25 mg Progesterone (Hyprogen[®], VetsPharma), 2 days thereafter 500 IU PMSG
- ▶ 10 μ g Buserelin acetate as symptoms of estrus appear

Anestrus in Sow

- ▶ Lactational anestrus is common in sows
- ▶ Proper nutrition is essential in early post-weaning (8 weeks) return to heat
- ▶ 500 IU PMSG and 200 IU HCG is recommended treatment of post-weaned anestrus sows



Anestrus 10-month old gilt with multiple small follicles and no corpora lutea on her ovaries.

Anestrous in Mare

- ▶ Mares have winter anestrous and lactation anestrous
- ▶ Mares exhibit foal heat 6 to 9 days after parturition but enters anestrus thereafter
- ▶ Mares anestrous after foaling are termed 'Every Other Year Mares'
- ▶ Good nutrition after foaling reduces the length of anestrous
- ▶ 'Psychological Anestrus' or silent heat mares 'break down' if presented to a stallion with restraint
- ▶ Buserelin at the dose rate of 20 μg twice daily for 10 days usually brings mares into estrus by 7 to 10 days



Cervix during Anestrus



Edematous and relaxed cervix during estrus