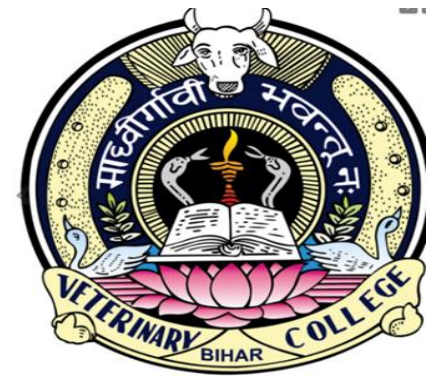




बिहार पशु विज्ञान
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BIHAR ANIMAL SCIENCES
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Examination of cases of Metritis

VCP II, VCP 411 & VCP 511

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One of the most significant causes of infertility in cattle is the metritis complex of diseases: retained fetal membranes, metritis, endometritis and pyometra. These diseases share common etiological factors, predispose to one another and, to a large extent, share common treatments.

THE METRITIS COMPLEX : Metritis ; Endometritis ; Pyometra

Metritis :

- Infection extends into deeper layers of the uterus, which may include extension through the serosa (Perimetritis) or into the broad ligament (Parametritis)
- There are systemic signs of illness, which may vary from relatively mild to very severe: the life-threatening cases that occur within a few days of calving are often known as puerperal metritis.

Endometritis : 1st, 2nd & 3rd

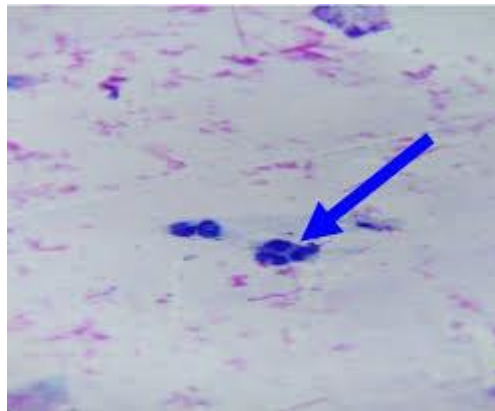
- ❑ Infection is confined to the endometrium and stratum spongiosum of the submucosa
- ❑ Affected cows show no systemic signs of illness
- ❑ Clinical signs are confined to the presence of purulent material (clinical endometritis) or the presence of leukocytes but no overt pus in uterine or cervical discharges.
- ❑ Mucus of estrum will be cloudy and milky instead of clear & translucent and contain many leucocytes. Bovine cervical mucus in pro-estrous may normally be slightly cloudy
- ❑ On rectal examination the uterus may feel slightly large, heavy, and thick walled
- ❑ The estrous cycle and period are usually normal in length but in occasional cases the cycle may be shortened to 8 to 12v days due to acute endometrial inflammation preventing development of a normal CL. Because of the abnormal endometrium and infection in the uterus the fertilized ovum may die and the cow again came into estrous.

PYOMETRA : Third degree of Endometritis

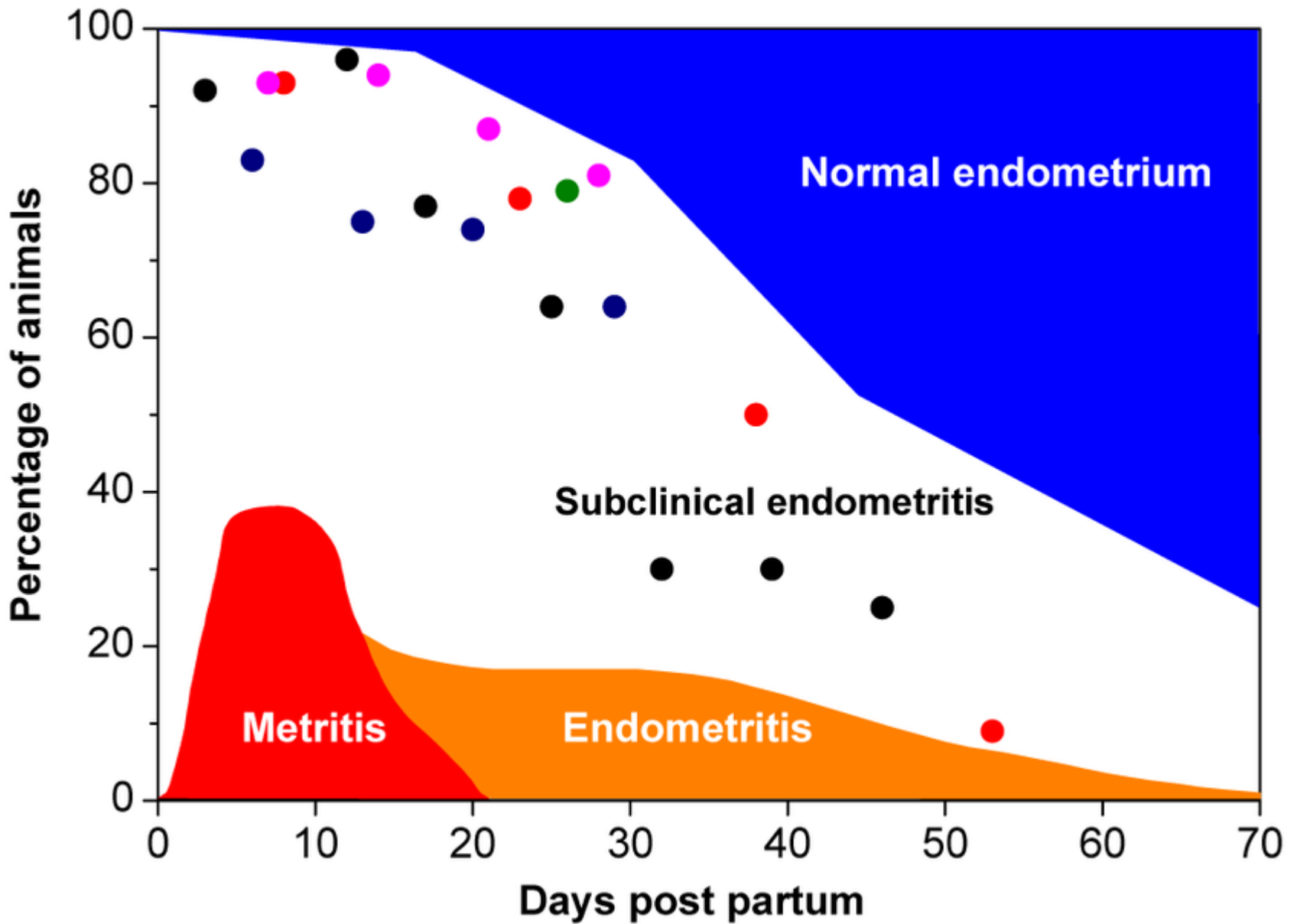
- Chronic infection of the uterus, with accumulation of purulent exudate in the uterine lumen. Infection may be confined to luminal layers, or may extend deep within the wall of the uterus
- Failure of Estrum
- No signs of systemic illness
- A retained corpus luteum is present with failure of Estrum. This CL is not the CL of Pregnancy in PPM that persist due to the uterine infection
- This is actually the consequences following abnormal parturition, U. Infection, RFM, Premature Birth (PMB), TB (Twin birth), Dystocia, Septic Metritis, PPM

Prognosis- Fair to good. This is seldom static; nearly all cases recovered spontaneously with the passage of time and sequential oestrous period

Endometritis scoring scheme



Organisms identified	Number of isolates	Percent (%)
<i>E. coli</i>	18	26.47
<i>Streptococcus spp.</i>	16	23.52
<i>Staphylococcus pp.</i>	14	20.58
<i>Bacillus spp.</i>	12	17.64
<i>Corynebacterium spp.</i>	04	5.88
<i>Pseudomonas spp.</i>	04	5.88



Treatment

1st degree-

- ❑ 1% to 2% of Lugol's solution (1 to 2 ml in 100ml of Distilled water) by I/U for three days or Broad spectrum antibiotic may be given parentally for 3 to 5 days. Some time

2nd degree-

1. 2 to 4% Aqueous Lugol's solution is infused intrauterine. Broad spectrum antibiotic is worth trying and may be given parentally or locally for 3 to 5 days .
2. Inj. of Cloprostenol sodium by I/M
3. Inj. B Complex
4. Inj. Antihistaminic
5. Some Ruminotoric/ Digestive medicine

3rd degree (Pyometra)-

- A 5% Aqueous Lugols's solution is infused intrauterine for three days. If there is presence of CL then a luteolytic agent may be given through intramuscular route/IV followed by infusion broad spectrum antimicrobial for 5 days
- Inj. of Cloprostenol sodium by I/M
- Inj. B Complex
- Inj. Antihistaminic
- Some Ruminotoric/Digestive medicine

Prognosis – Depends on duration

Pyometra



Canine Pyometra or Pyometra complex

- Pyometra is a reproductive disorder very common in bitches over 8 years of age in which physiological effects of progesterone on the uterus play a major role. The traditional therapy for pyometra is ovariohysterectomy. The main advantage of ovariohysterectomy over medical management is that it is both curative and preventive for recurrence of pyometra.
- The traditional therapy for pyometra is surgical ovariohysterectomy which immediately removes the purulent contents of the uterus and suppresses the release of endotoxins. Drawbacks with surgery are the risk with anesthesia and that it renders the bitch sterile

Medical treatment may be indicated

- For Breeding bitches,
- Bitches in very poor condition or old bitches, in whom anesthesia would be dangerous
- Cases where the owners want to keep costs at a minimum,
- To improve the general status of the bitch prior to surgery

Note-Medical treatment is contraindicated for pyretic or hypothermic bitches with suspected peritonitis.

Treatment

General treatment

1. Use of an Elizabethan collar to prevent the ingestion of vulvar discharge
2. Antibiotic coverage with not nephrotoxic agents (e.g. amoxicillin-clavulanic acid 25 mg/kg/day) to prevent septicemia for bitch in bad general health or for those close monitoring is not possible.
3. Fluid therapy ($60 \text{ ml/kg} + \% \text{ dehydration} \times \text{body weight}/100$) to correct dehydration and treat toxic shock.

Specific Treatment

- 10 µg/kg of Cloprostenol for 5 to 7 days by s/c route
- Any broad spectrum Antimicrobial for 7 days
- Cabergoline @ 5mcg/kg

Side effect

- Hypothermia for 1–2 h.
- The core body temperature can fall by 0.75–2°C.
- Further reductions may occur with the re-administration of prostaglandins
- Increased frequency of defecation and occasionally diarrhea,
- Salivation and vomiting
- Depression or excitation with shivering.

The intensity of the side effects can be reduced using

- Administer progressive doses of prostaglandins: day 1: 0.10 mg/kg, day 2: 0.20 mg/kg and then 0.25 mg/kg
- Administer prostaglandins before feeding
- Administer a pre-treatment (Atropin, prifinium, metopimazine) 15 min before prostaglandins

Puerperal Metritis : First few days after calving



Bovine Pyometra



Fig. 1: Copious reddish brown color discharge (puerperal metritis)



Canine Pyometra



Canine Pyometra





Pyometra of Uterine
body

Thanks to All