




Top 20 Bovine Conditions Part 4



 This four-part series on the top 20 bovine conditions will set you up for boards success.

16. Listeria monocytogenes

- **Classic case:** Weaned-to-adult silage-fed cow
 - Acute onset pyrexia, depression, anorexia
 - Unilateral neurological signs:
 - Propulsive circling
 - Proprioceptive deficits
 - Unilateral tongue weakness, facial nerve paralysis, ear droop
 - Head tilt, nystagmus, strabismus
 - Drooling
 - Can cause placentitis, late-term abortion, and stillbirth
- **Dx:** clinical signs confirmed by:
 - CSF: increased mononuclear cells, high protein
 - Culture: *L. monocytogenes* in brain or aborted fetal tissues
- **Tx:**
 - IV oxytetracycline
 - Supportive care
 - Tube feeding, oral rehydration for inappetant animals
 - Electrolyte supplementation (potassium and bicarbonate lost in saliva)
- **Pearls:**
 - Prognosis: fair to good if patient ambulatory at onset of Tx; poor if patient is recumbent at onset
 - *L. monocytogenes* grows in spoiled silage that is often at an elevated pH
 - Ascends nerves to brainstem, animal also becomes bacteremic
 - Often occurs in winter due to ability of pathogen to grow in cold temps
 - Contaminates milk; ZOO NOTIC!

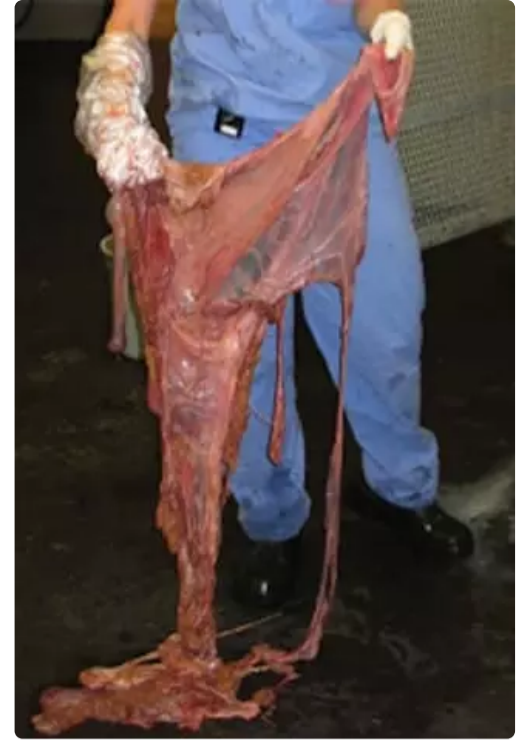


Unilateral facial nerve paralysis (here, right-sided ear and eyelid droop) is often seen in listeriosis

17. Retained fetal membranes (RFM), metritis, pyometra

- **Classic case:**
 - RFM: if not passed by 24 h post-partum
 - May see decomposing placenta hanging from vulva with foul smell
 - Delayed return to estrus
 - Metritis: 3 d to 2 wks post-partum
 - Large, fluid-filled uterus palpable per rectum
 - Red-brown, purulent, malodorous discharge from vulva and matted on tail

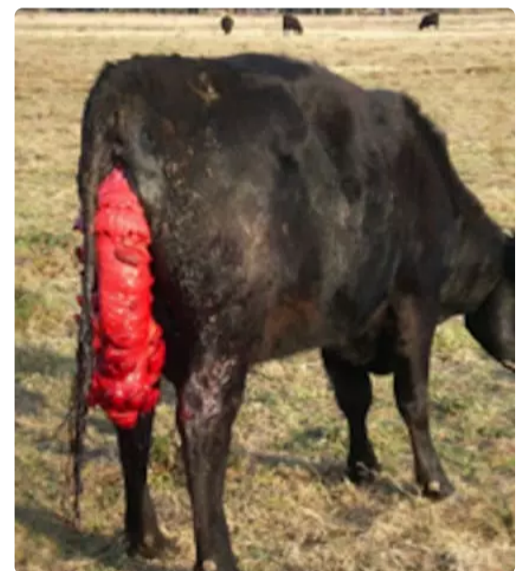
- Shortened estrous cycles
- Pyometra: similar to metritis
 - Purulent or mucopurulent exudate but NO odor
 - Corpus luteum (CL) on the ovary
- **Dx:**
 - RFM: apparent visible signs
 - Metritis: etiologies usually nonspecific infection, but also:
 - Brucellosis
 - Leptospirosis
 - *Campylobacter* spp.
 - Trichomoniasis
 - Palpation per rectum for metritis/pyometra:
 - Enlarged, fluid-filled uterus
 - Retained CL with pyometra
- **Tx:**
 - Retained placenta:
 - Manual removal potentially harmful, not recommended
 - Trim excess tissue for hygiene
 - Cows expel the membranes in 2-11 d without Tx
 - Intrauterine antimicrobials NOT usually beneficial and would be extralabel drug use
 - Metritis: prostaglandins
 - If cow septic: systemic antibiotics, NSAIDs, IV fluids
 - Pyometra: prostaglandins
- **Pearls:**
 - Prognosis: good to excellent for all three conditions with appropriate Tx
 - Metritis and pyometra negatively impact reproductive efficiency by delaying return to normal estrous cycle postpartum
 - Good dry cow management is essential to prevent RFMs and metritis



An expelled placenta

18. Uterine prolapse

- **Classic case:**
 - Multiparous dairy cattle OR first-calf beef heifers
 - Within hours of calving, at most
 - One or both uterine horns everted from vagina and vulva
 - Caruncles (and often RFM) are visible
 - +/- Concurrent milk fever
 - Severe cases: hypotensive, hemorrhagic shock, often from rupture of the uterine artery
- **Dx:** evident on physical exam
 - Labwork for IV fluid plan: assess serum ionized Ca⁺, K⁺, phosphorus, Mg⁺, PCV, and total protein
 - Tx in the field is usually presumptive based on clinical signs
- **Tx:** physically difficult!
 - Address shock
 - Cleanse uterus and give epidural
 - Push uterine tip up and in, working between bouts of straining, using a closed fist to prevent laceration of the uterus
 - Once replaced, fill uterus with clean warm water, and then siphon it out OR fully evert tips using disinfected bottle to ensure complete reversion
 - Real-life tip: use caution administering IV calcium prior to everting uterus as it can increase straining against you as you work!
- **Pearls:**



Uterine prolapse, note the visible caruncles

- Prognosis good to excellent assuming minimal complications such as hemorrhage or uterine laceration
- If properly replaced they do not recur, or only infrequently
- Prevent uterine prolapses by minimizing incidence of milk fever

19. Frothy bloat

○ **Classic case:**

- Acute abdominal distention: mainly on left side
- Tachycardia
- Open-mouthed breathing
- STABLE frothy green rumen ingesta
 - Foam bubbles do not pop
 - Cow cannot eructate and blow off rumen gas
- May be found acutely dead, bloated on left

○ **Who gets bloat?**

- Pasture cows, recently put on legume pasture (past 2 wks)
- Feedlot cows, cause unclear, but main theory:
 - Slime-producing rumen bacteria colonize rumen when fed high-concentrate, fine particulate diet
- Remember that free gas bloat also occurs (many causes):
 - Generally due to obstruction of normal free gas eructation or decreased rumen contractions

○ **Dx:** visually see bloat, but to Dx frothy vs. free gas bloat:

- Pass tube into the rumen
 - Frothy: frothy green rumen ingesta oozes out and not much relief of bloat
 - Free gas: high volume of gas blows off and bloat resolves

○ **Tx:**

- Mild/early frothy bloat:
 - Antifoaming agents: help froth/foam bubbles pop, i.e.:
 - Vegetable or mineral oil, 250-500 mL
 - Dioctyl sodium sulfosuccinate (DSS, a veterinary surfactant): commonly combined w/ oils
 - Poloxalene for legume bloat, but not feedlot bloat
- Severe, life-threatening case:
 - Emergency rumenotomy
 - Short of surgery, try a large-bore (2.5 cm) rumen trocar or cannula
 - Give antifoaming agents through it, allow gas to blow off (takes hours)
- Free gas bloat:
 - Determine cause of physical or functional obstruction of eructation to prevent recurrence

○ **Pearls:**

- Prognosis good for mild, early cases
- Prevention, frothy pasture bloat:
 - Ionophores (monensin, lasalocid)
 - Gradually introduce cows to lush legume pastures
 - Feed hay prior to pasture access so they do not gorge themselves
- Prevention, frothy feedlot bloat:
 - Add 10-15% coarse-chopped roughage to feed
 - Ionophore supplement like lasalocid



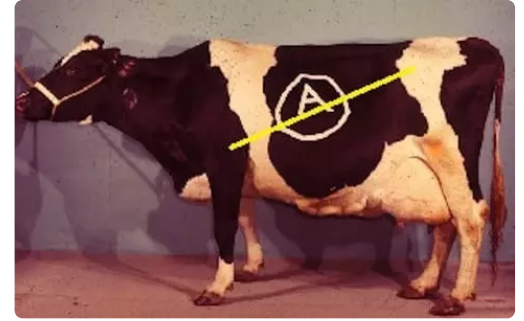
Abdominal distention typical of bloat (arrows)

20. Displaced abomasum (DA)

○ **Classic case:** Multiparous dairy cow within 30 d of calving

- Partial anorexia and decreased milk production
- Scant stool with different consistency from herdmates
- "Popped" or "sprung" rib cage: ribs pulled outward
- High-pitched tympanic or musical "ping" over ribs
 - Ping on line between L elbow and L tuber coxae (hip) along ribs 9-13 for left DA (LDA)

- Ping on R for right DA (RDA) +/- abomasal volvulus along ribs 10-13
- If RDA with volvulus: tachycardia, “papple” shape (i.e., pear on L, apple on R), complete anorexia, colic, dehydration
- **Dx:**
 - Ping on exam is usually diagnostic
 - Rectal palpation: may palpate convex muscular organ in right abdominal quadrant for RDA/abomasal volvulus (DDx: cecal dilatation)
 - Expect hypochloremic metabolic alkalosis: twisted abomasum sequesters acid (HCl); possible acidosis if has progressed to circulatory failure
 - Liptak test: Insert 4.5-inch spinal needle transabdominally just ventral to ping and aspirate; if acidic then = abomasal fluid
- **Tx:**
 - Medical: only indicated in LDA, often unrewarding but can include:
 - IV or oral calcium supplementation, transfaunation, gastric stimulants
 - Surgical:
 - Roll and toggle/blind stitch
 - Abomasopexy
 - Omentopexy
- **Pearls:**
 - LDA or uncomplicated RDA: prognosis excellent for life and return to productivity
 - RDA with volvulus: more guarded prognosis depending on duration of disease
 - LDAs NOT emergencies vs. RDA +/- volvulus ARE emergencies
 - Intervene in herd if prevalence of DAs is over 1%
 - Ketosis, subclinical hypocalcemia, uterine disease all predispose to DA
 - Good pre-partum feeding practices that limit prolonged negative energy balance prevent most DAs



*Location of LDA ping:
yellow line between L elbow
and L tuber coxae*

Images courtesy of Dr. Lisle George (listeriosis, placenta, bloat, LDA), USDA, APHIS (prolapsed uterus), [D'Arcy Norman](#) (intro cow), and [DerHexer](#) (kissing cow and dog).

Ruminants