

Unit : Bovine Mastitis

Lesson : 3

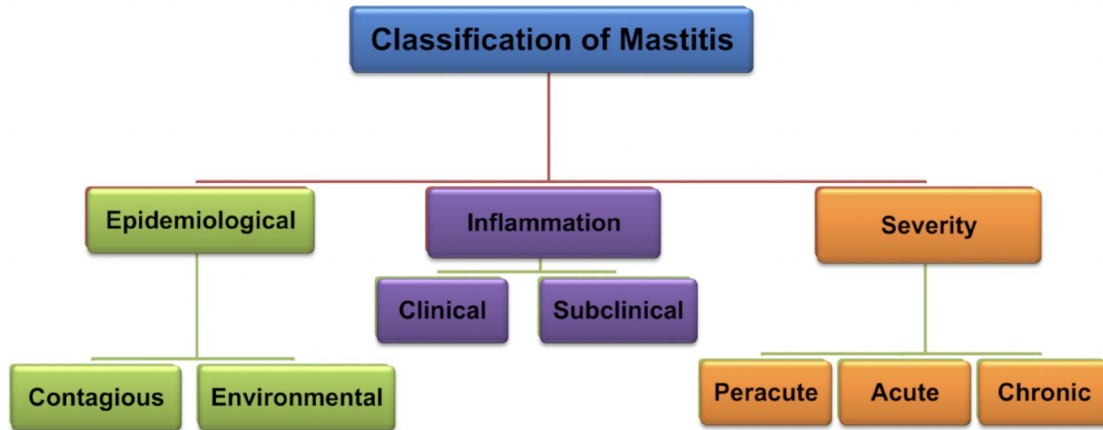
Clinical signs and diagnosis of mastitis

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Classification of Mastitis



Contagious

- Spread from infected quarter to a healthy quarter or from diseased to healthy animal usually at the time of milking through the hands, towels and/or the milking machine
- *Streptococcus agalactiae*, *Staphylococcus aureus*, *Corynebacterium bovis*, and *Mycoplasma* spp.

Environmental

- Spread primarily outside of the milking parlor, i.e., the causative bacteria come from the cow's environment such as bedding material, soil, manure, feces, and stagnant water.
- Environmental mastitis is highly influenced by management practices (Garcia 2004)
- *Escherichia coli*, *Streptococcus uberis*, *Streptococcus dysgalactiae*, and *Klebsiella* spp. (Abebe et al., 2016)

Sub-clinical Mastitis

- **Sub clinical mastic refers to inflammation of the mammary gland in the absence of visible gross lesions in the udder or its secretion with the presence of pathogenic microorganisms and unusual number of somatic cells in the milk (Radostits et al., 2007)**

Clinical Mastitis

Abnormal secretion

Visible changes in milk
watery/ with
flakes/ creamy, etc
Clots or flakes with
discoloration gains
importance



Abnormal gland

Enlarged or
regressed quarter
Swollen and
distended teat
Inflamed udder
Pain on palpation
Diffused or local
fibrosis



Abnormal Cow

Toxemia, pyrexia,
tachycardia,
tachypnea, ruminal
hypomotility,
depression,
recumbency, and
anorexia

Chronic mastitis

- Udder may be regressed
- Cold to touch
- Milk secretion- scanty or no secretion
- Fibrosis- noted on careful examination



Udder abscess – chronic mastitis



Pain on palpation



Misoriented teat



Gangrenous mastitis



Sloughed off teat and healed quarter



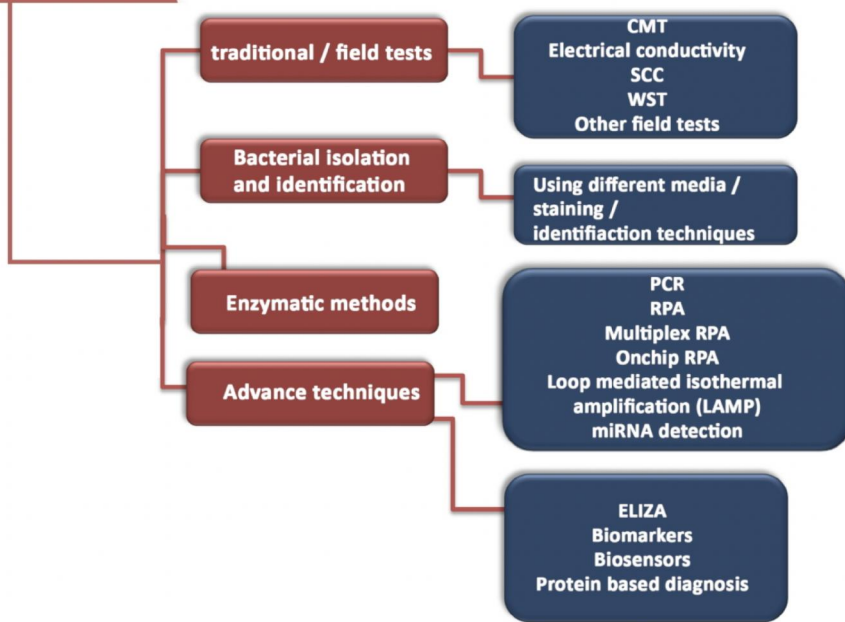
Heavily swollen L.nodes



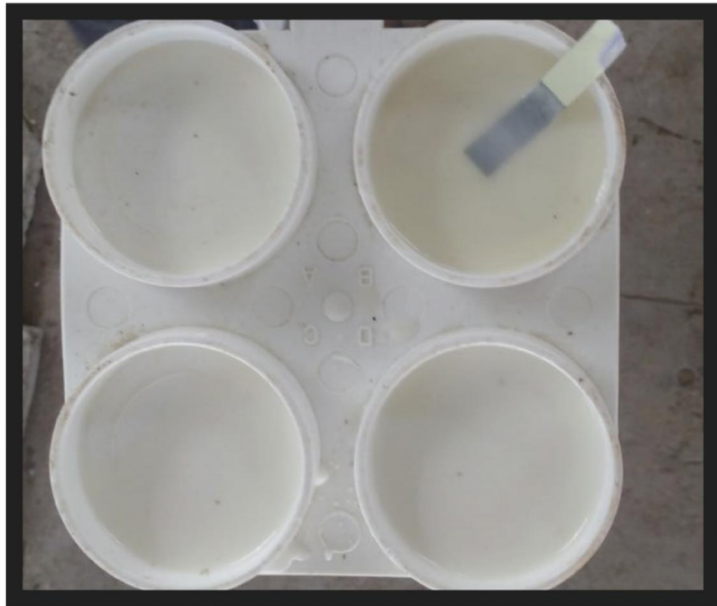
Gangrenous mastitis- air escaping sound



Diagnosis



pH of Milk



Strip cup test



Milk checker



Somatic cell count

Bulk tank milk

SCC /nl	Infected qtrs in herd (%)	Production loss (%)
2,00,000	6	0
5,00,000	16	6
10,00,000	32	18
15,00,000	48	29

Bulk tank SCC > 3 lakh /ml warrants examination of individual animal.



String Sampling

- **Sampling from the positive pressure side of the milking system**
- **Sample from group of animals got instead of whole herd**

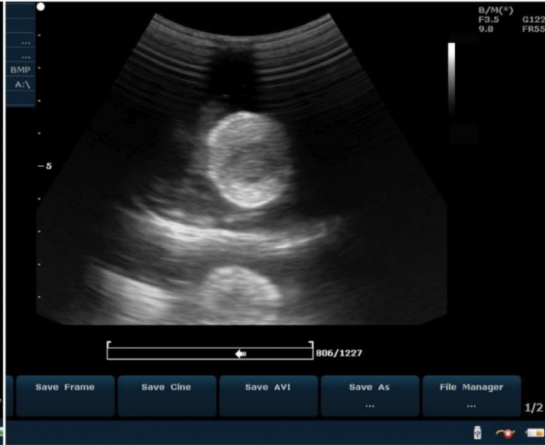
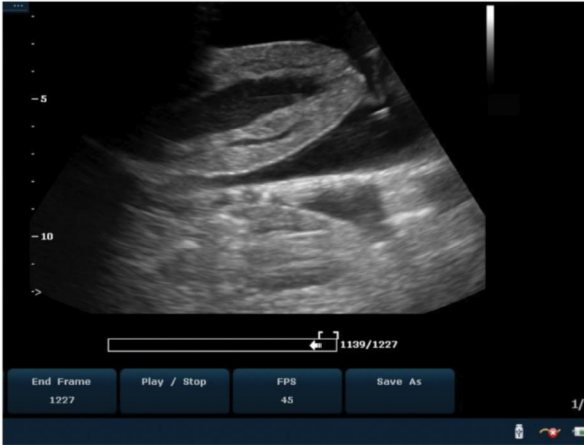


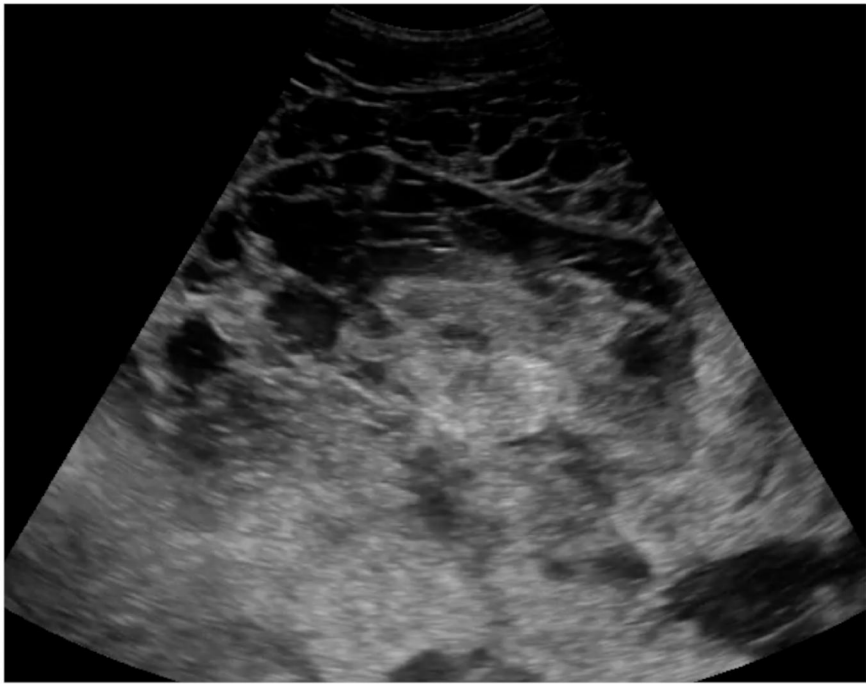
Culture interpretation

Initial sample	14, 21 & 28 days later	Result
+	-	Quarter is cured
-	+	New infection
+	+ With other strains	New infection

Sample is considered contaminated if more than 3-4 spp of bacteria isolated

Ultrasonography of teat









Thank you