


Pregnancy Failure

Bovine specific




General Approach to Failure of Pregnancy

- Preliminary discussions
 - Is there a public health issue?
 - **Is there really a problem?**
 - Cost benefit analysis
 - Discuss isolation
 - Clinical Investigation of FOP
 - Clinical history and interview
 - Take precautions to prevent zoonotic disease
 - **Determine common diseases**
 - **Examine Mother, Fetus and Placenta**
 - **Diagnostic testing**
 - Final diagnosis
 - Treatment or recommendations.
- 



The Cow

- Mostly you will not get a diagnosis from sporadic cases, especially stillbirths
 - Bovine placenta has much reserve.
 - Adventitial placentation
 - Infectious causes are the important ones - microbiological/histological diagnosis
 - Marked regional differences in agent.
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Bovine (Beef) FOP

● Embryonic mortality

● 10%

● Abortion

● 1.6%

● Stillbirth

● 2.6%









● Perinatal mortality


● 4%





Causes of Bovine Abortion

 No diagnosis	58
 Noninfectious	1
 Infectious	42
 Bacterial	17
 Protozoal	16
 Viral	4
 Fungal	4
 Ureaplasma	2



Disease of the Bovine Fetus

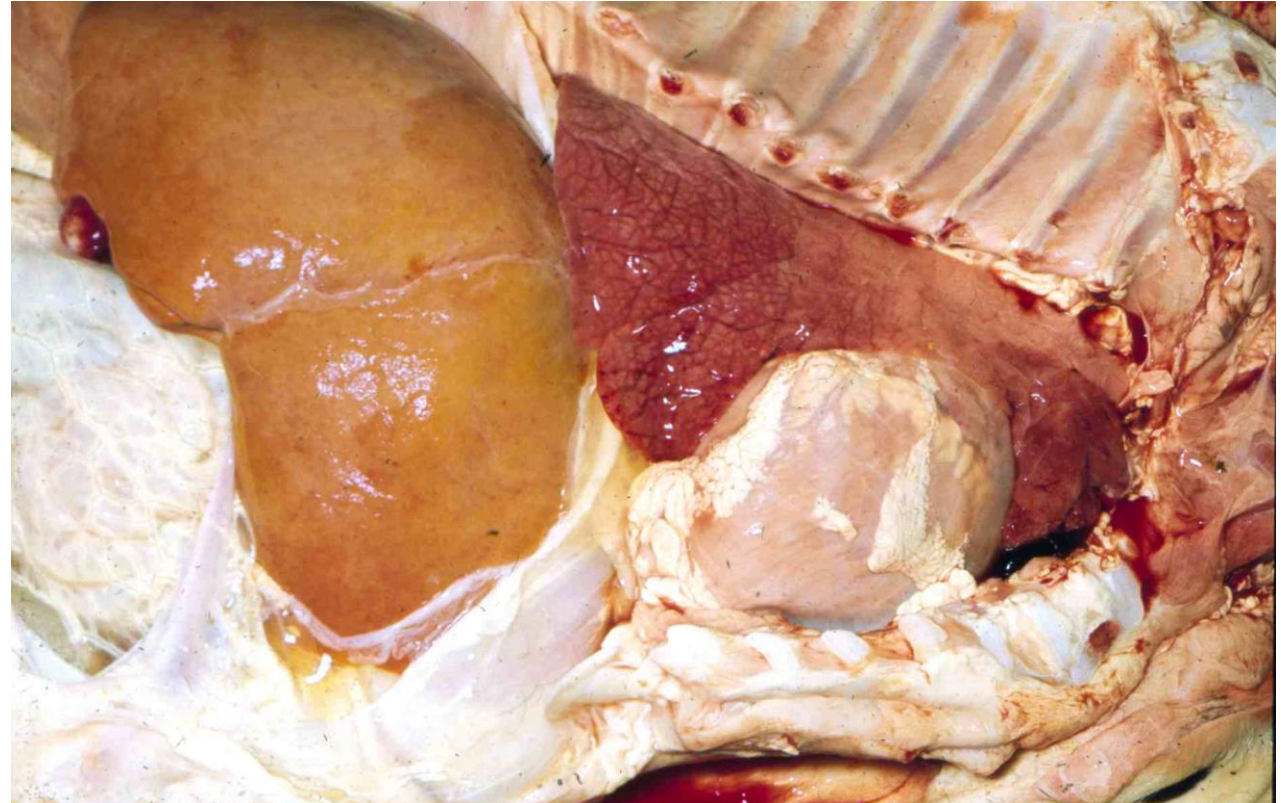
Fetal lesions

- Dermatitis
 - Neck shoulder lesions
 - Mycotic
- Heart failure
- Focal necrosis in liver



Fetal lesions

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 - mycotic
- Heart failure
 - *Pestivirus bovis, tauri* (BVDV)
 - *Neospora caninum*
 - Vit E / Selenium
- Focal necrosis in liver





Fetal lesions

● Dermatitis

- mycotic

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- *Pestivirus bovis, tauri* (BVDV1, 2)
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● Focal necrosis in liver

- Herpesvirus (*Varicellovirus bovinealpha1* ; BoHV)
 - Listeria
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Normal Bovine Placenta

Normal uterus



Normal uterus



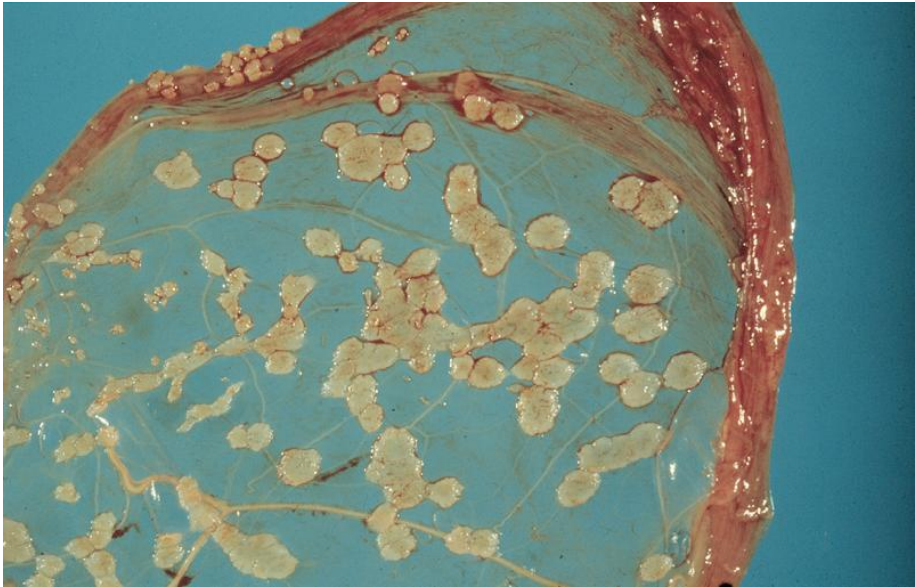
Normal Chorionic surface



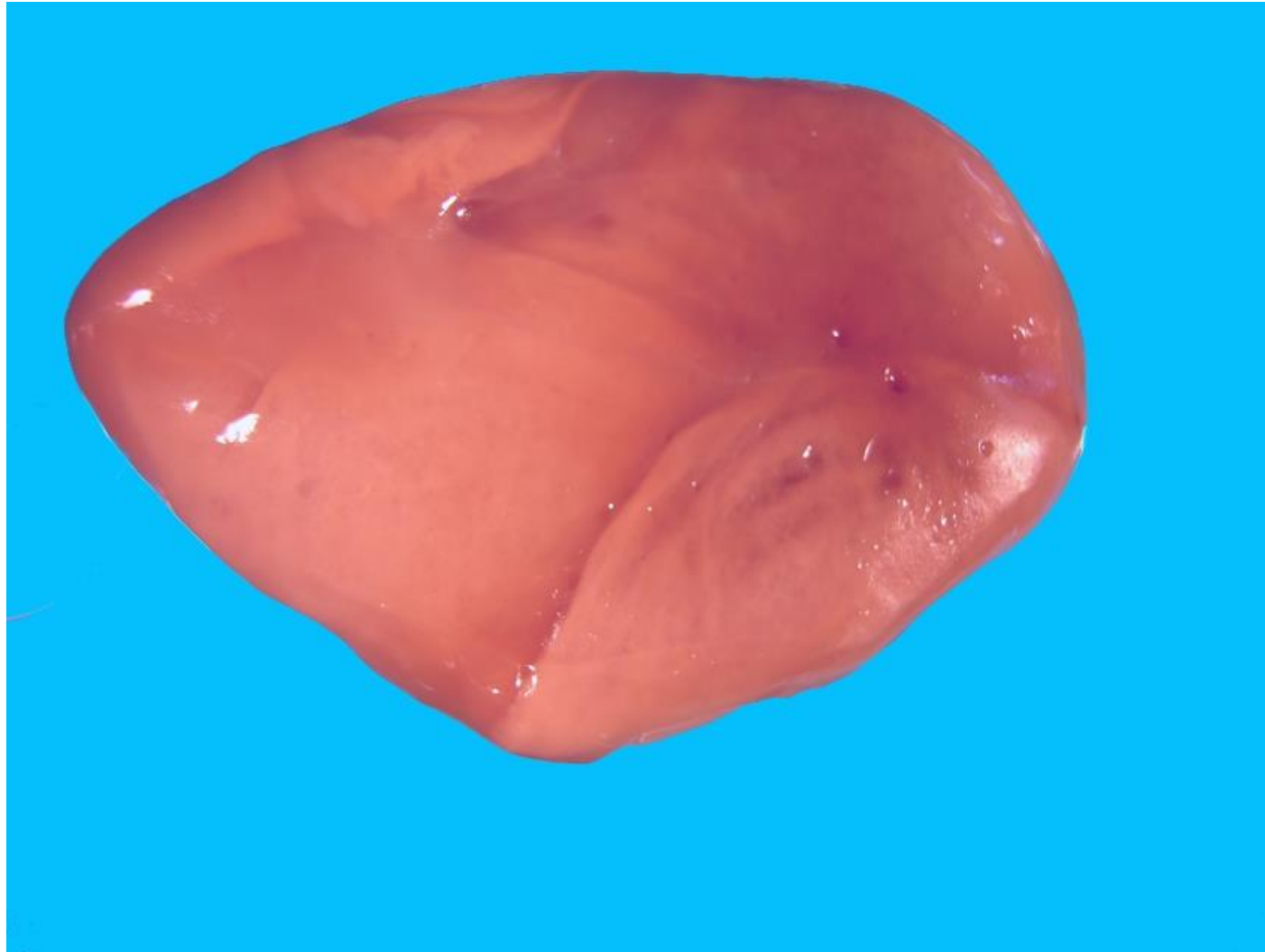
Placental mineralization



Amniotic plaques are normal



Hippomane



Adventitial placentation



Adventitial placentation



Disease of the Bovine Placenta

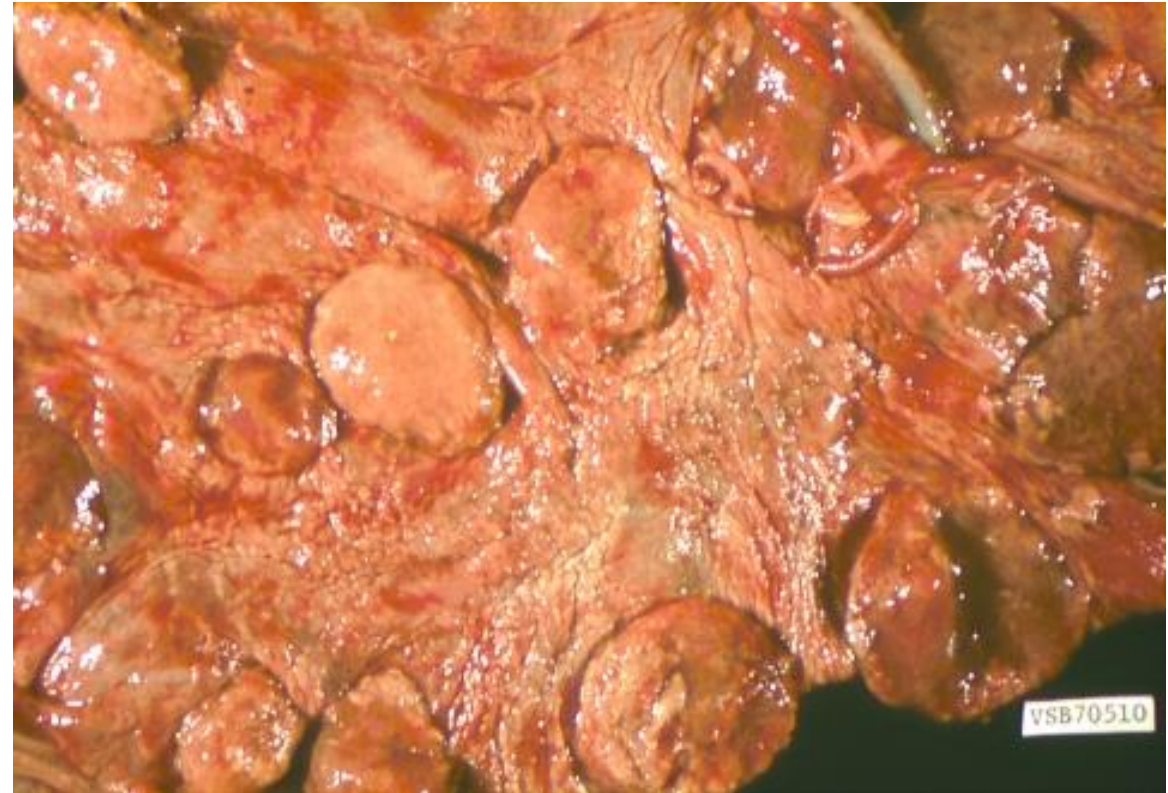
Placentitis

- edema
- exudate
- necrosis of cotyledon
- thickening of intercotyledonary placenta
- cupping of cotyledon



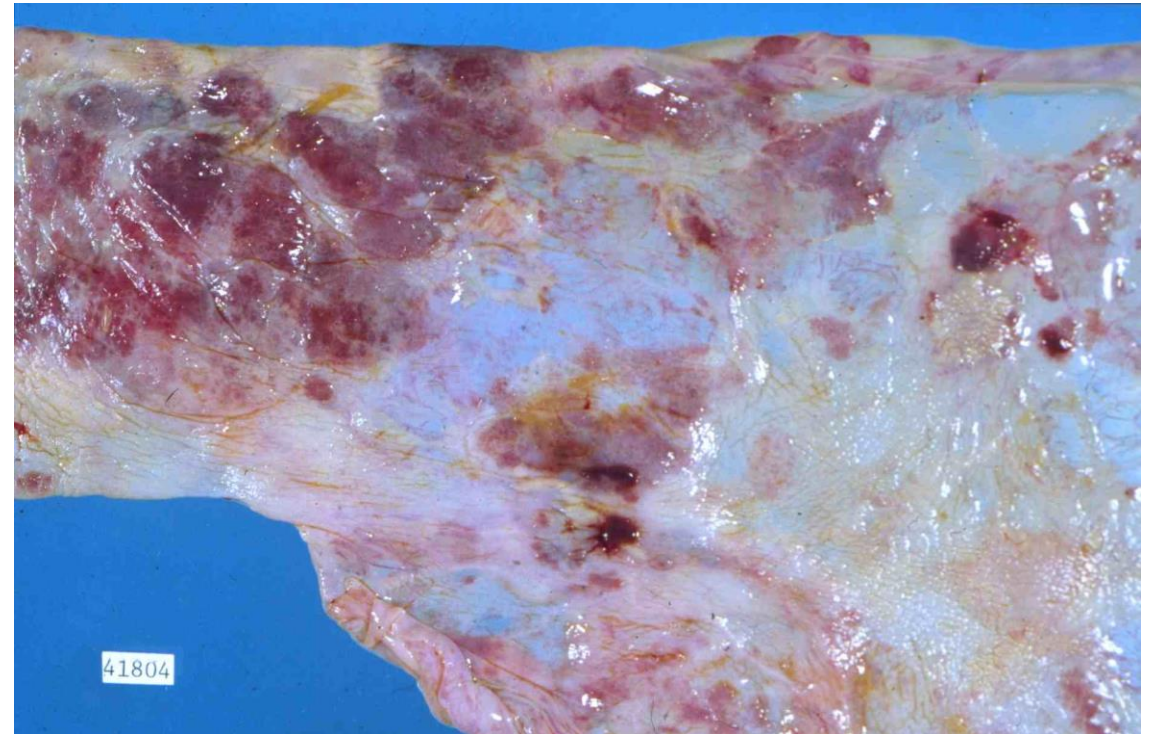
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Amnionitis

- Ureaplasma
- Rarely
 - mycotic
 - bacterial





Common abortogenic agents

Bacterial

- Placentitis
- *Bacillus licheniformis*
- *Trueperella pyogenes*
- Mycoplasma/Ureaplasma
 - *Ureaplasma diversum*
 - *Amnionitis, placentitis*

Fungal

- Placentitis
 - *Aspergillus fumigatus*
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Common abortogenic agents

Protozoal

- Encephalitis, myocarditis
- *Neospora caninum*

Viral

- *Pestivirus bovis; tauri* (Bovine Viral Diarrhea virus)
 - Underdiagnosed – no lesions or virus isolation
 - *Varicellovirus bovinealpha1* (BoHV-1)
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Regionally important

● Bacteria

- *Brucella abortus* (the original epizootic bovine abortion)
- *Campylobacter fetus*
- *Coxiella burnetii*

● Protozoal

- *Tritrichomonas foetus* – natural breeding

● Viral

- *Bluetongue virus* – West Coast - Okanagan Valley

● Other

- Pine needle abortion (aka ponderosa pine abortion)
- *Pajaroellobacter abortibovis* (Foothills abortion; ‘epizootic bovine abortion’) - Pajaroello (pa ha hell o) tick borne disease of Ca, Ne, Or)

