

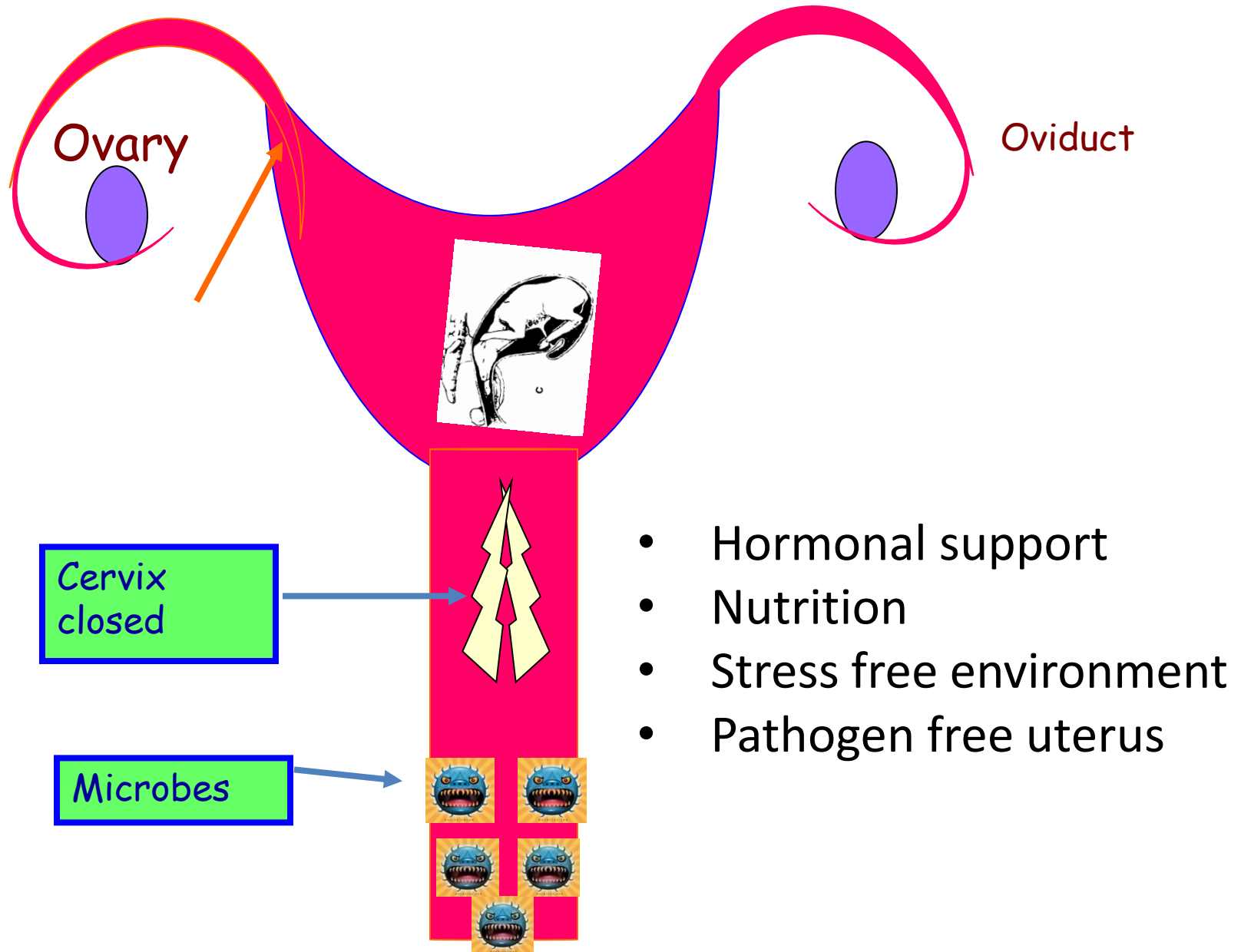
Clinical Management of Infectious and Non infectious Abortion



Dr. Ajeet Kumar

Professor cum Chief Scientist
Department of Veterinary Gynecology and Obstetrics
Bihar Animal Sciences University, Patna, Bihar
ajeetvet@yahoo.com

Maintenance of Pregnancy



Abortion – Expulsion of **dead fetus** of **recognizable size**

Still birth – Expulsion of **live fetus** without **lungs maturity**

Organogenesis - 100-150 days
Fetus recognizable

Causes of Abortion- Non infectious, Infectious

A. Non-infectious

- **Nutritional** - Vit A, E, Se, Fe
- **Heat stress**
 - Fetal hypotension
 - Hypoxia
 - Acidosis
 - Pyrexia
 - Pain
- **Trauma**
 - Falling
 - Slipping
 - Accidents

B. Genetic

- Embryonic mortality
- Fetal anomalies

C. Miscellaneous

- Fetal mummification
- Fetal maceration
- Uterine torsion
- Uterine rupture

Toxins - Non-Infectious

- **Pine Needle Abortion**

- Isocuppressic acid
- Labdane resin



- Retained placenta and endometritis are common sequelae.
- Prevention requires isolation of cattle from areas containing pine needles.

Non-Infectious

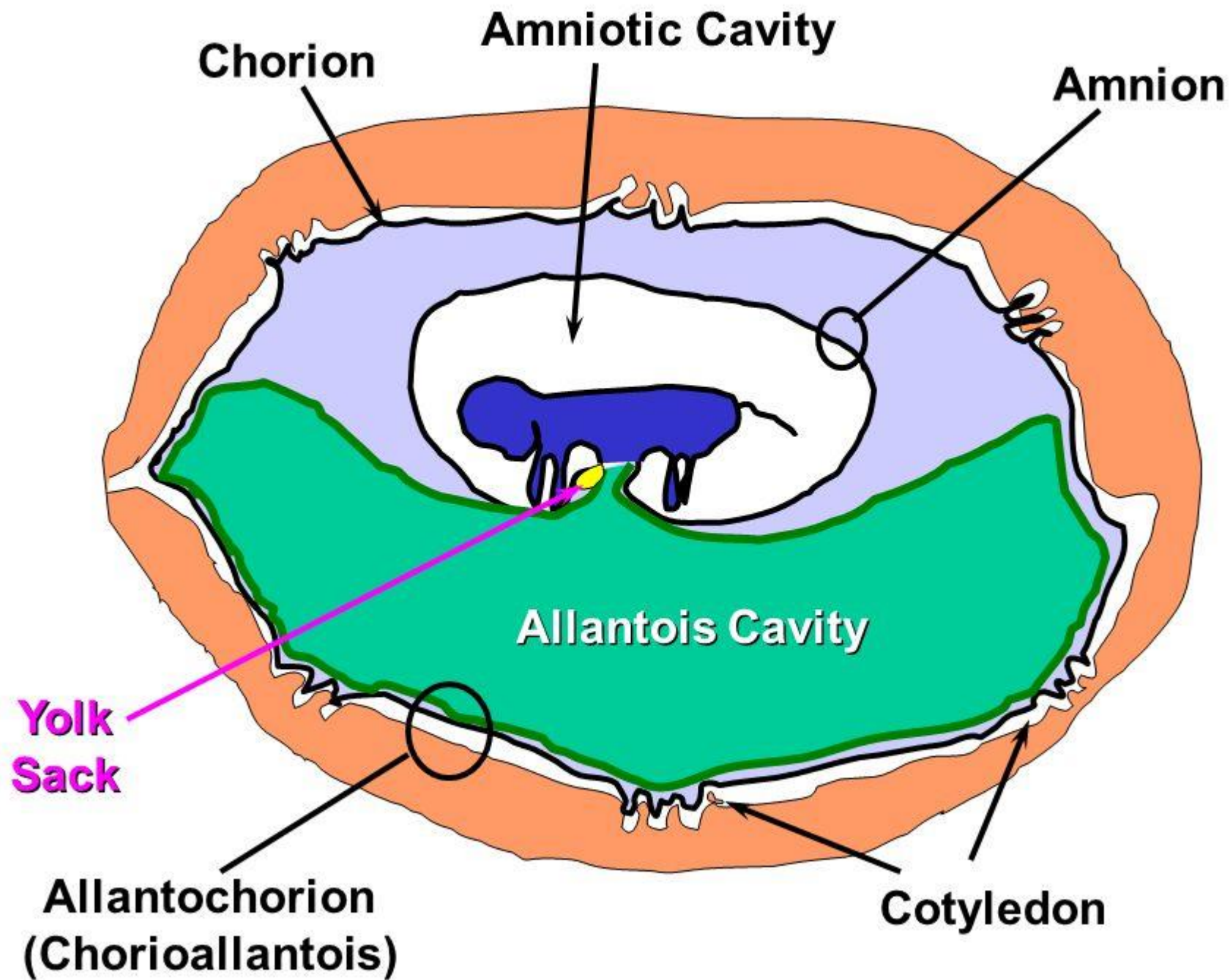


Locoweed

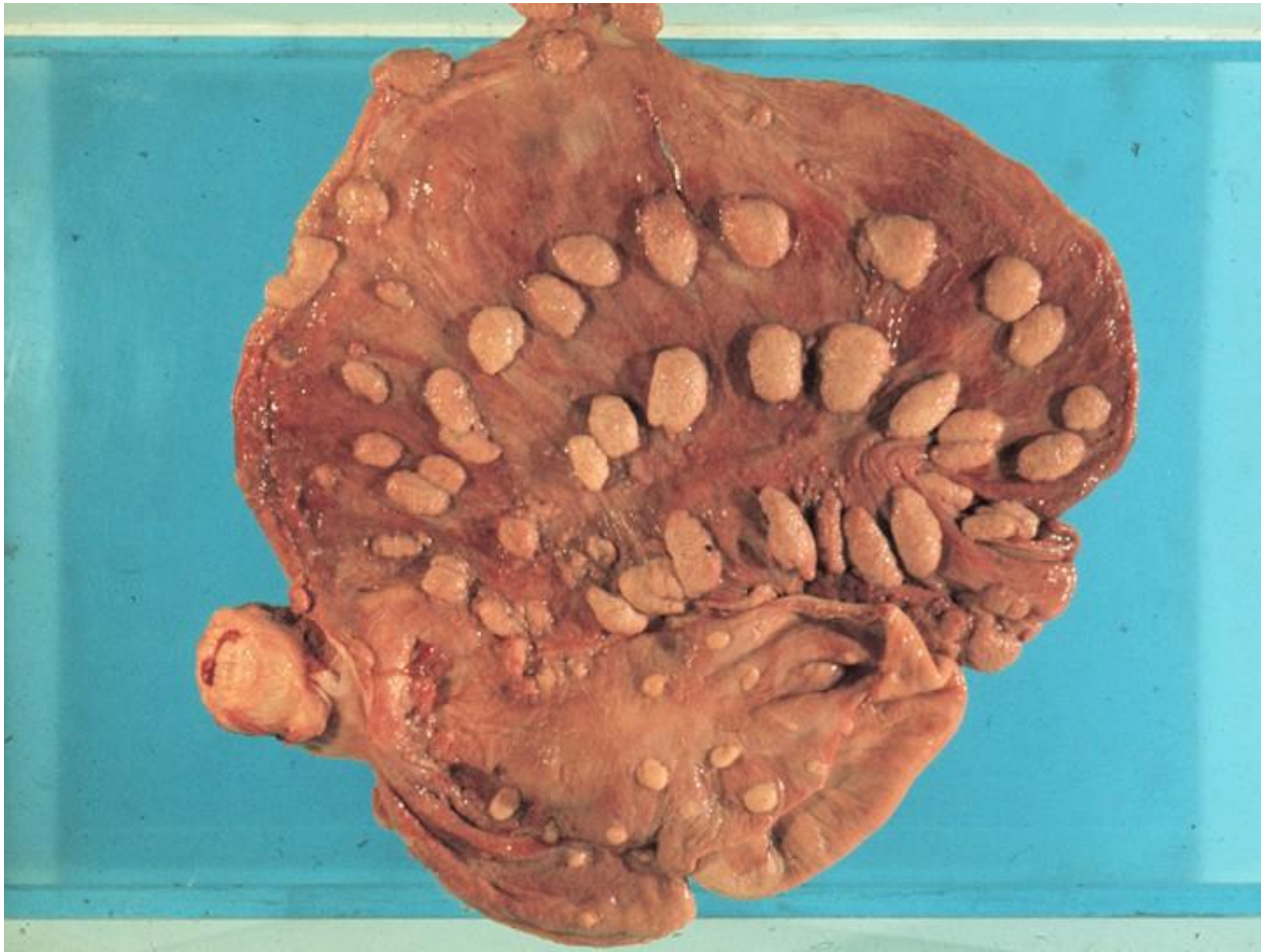
- *Astragalus* and *Oxytropis*
- abortion, teratogenesis, hydrops allantois, deficient uterine and placental vascular development, decreased cotyledonary development.
- Abortion -consumption for 4 to 6 weeks.
- indolizidine alkaloid swainsonine- increased peripheral vascular resistance in the fetus - heart failure, death, and abortion.



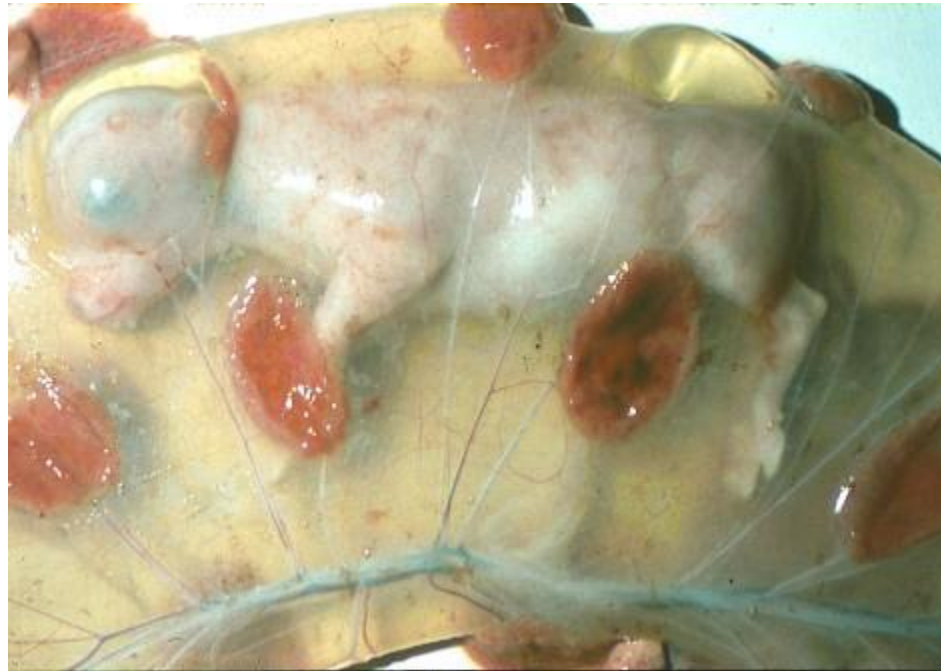
Broom Weed



Normal Uterus



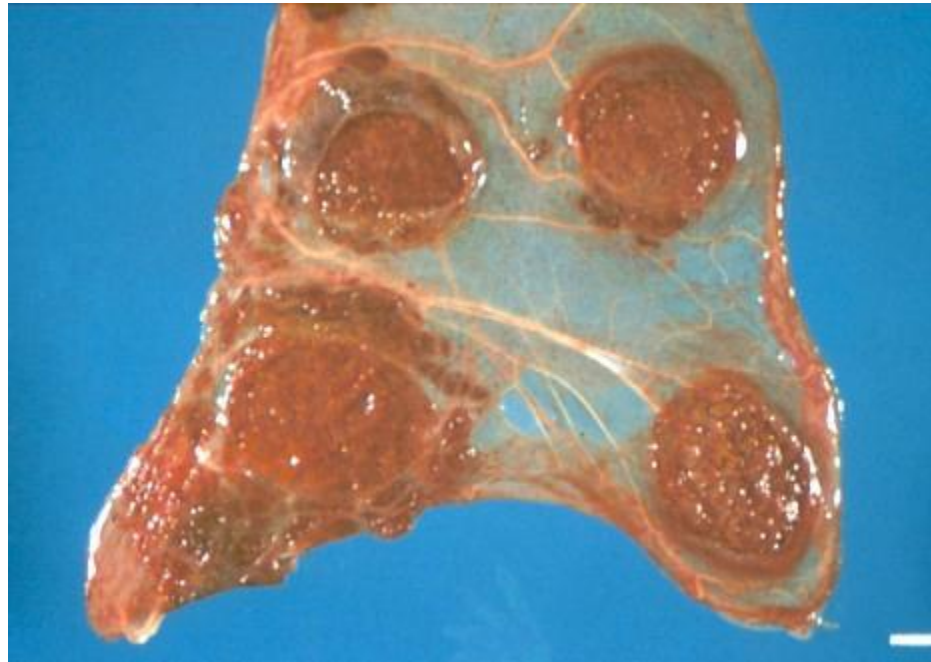
Normal Chorionic Surface



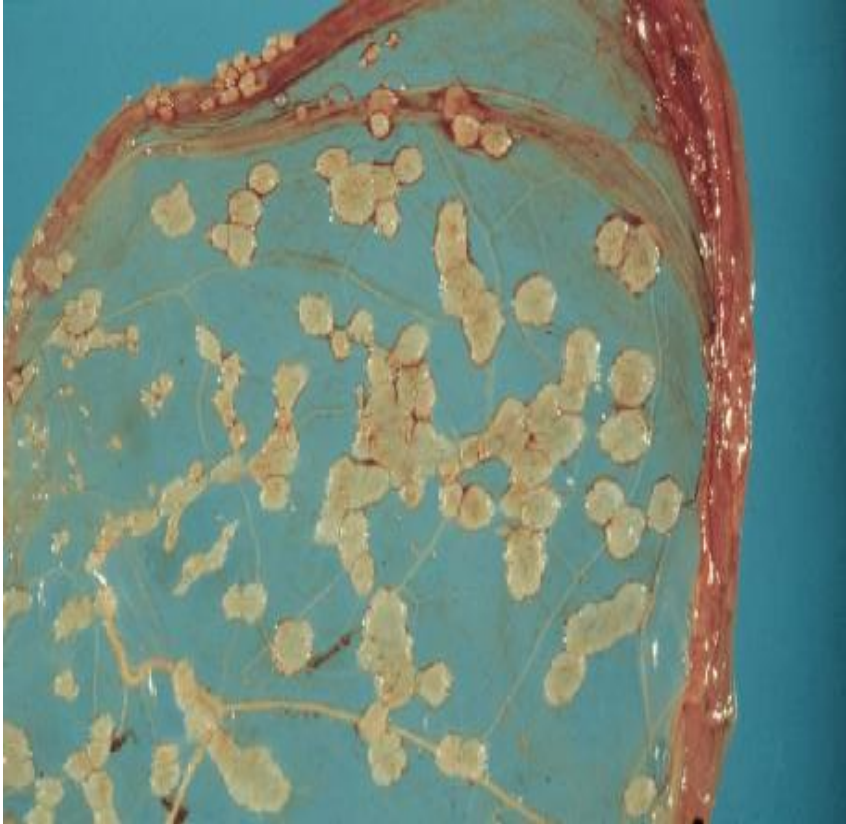
Placental Mineralization



Adventitial Placentation



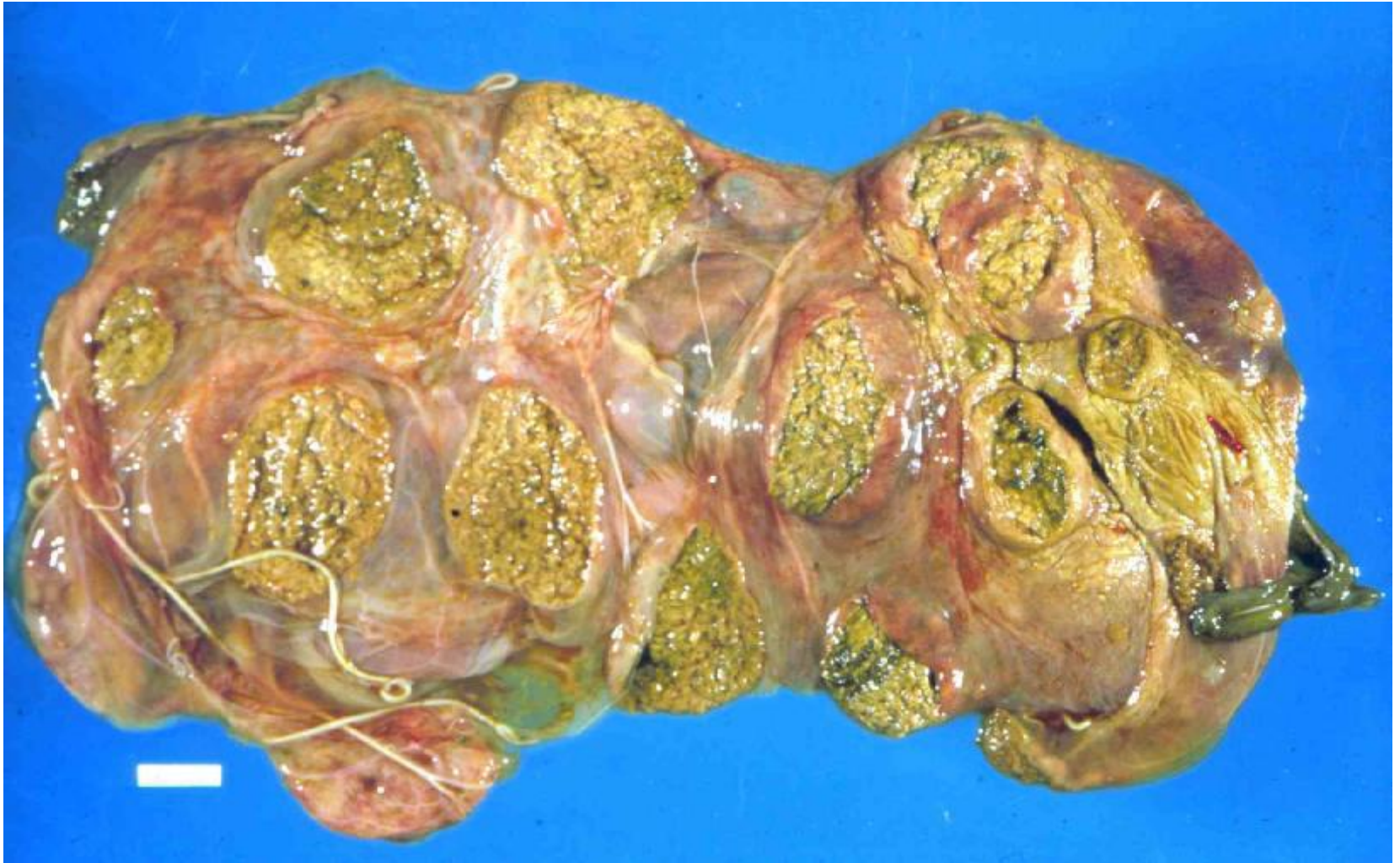
Amniotic Plaques are Normal



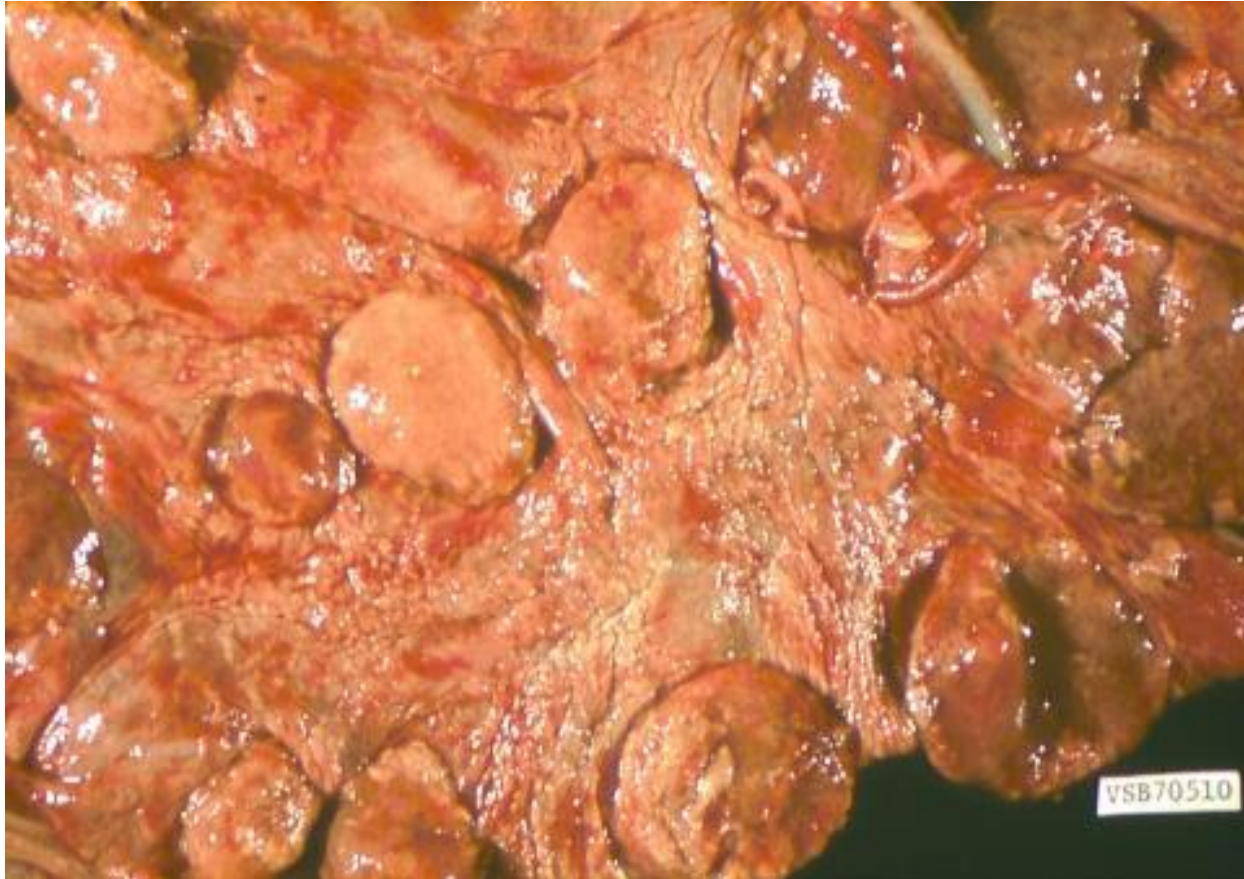
Placentitis

- **Edema**
- **Exudate**
- **Necrosis and infarction of cotyledon**
- **Thickening of intercotyledonary placenta**
- **Cupping of cotyledon**
- **Mineralization**
- **Vasculitis**

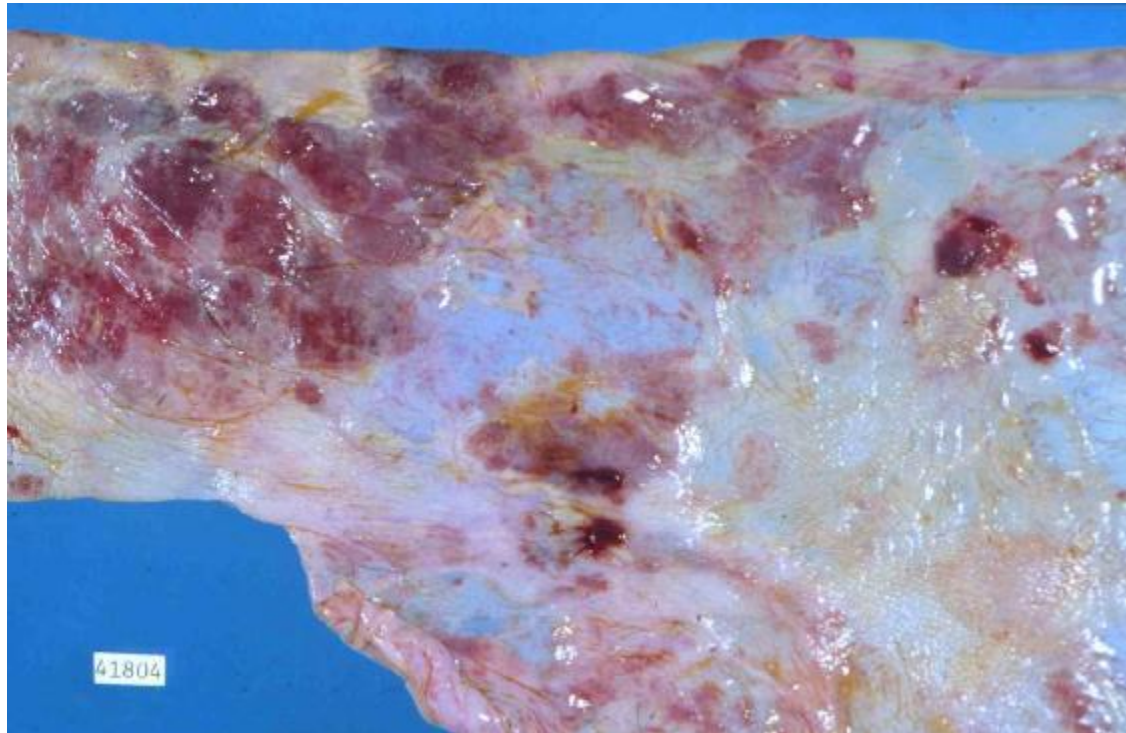
Placentitis



Placentitis



Amnionitis



Infectious abortion

- **Bacterial**
 - Brucellosis
 - Campylobacterosis
 - Leptospirosis

- **Viral**
 - IBR
 - BHV
 - BVD
 - Epizootic bovine abortion

- **Protozoal**
 - Trichomoniasis
 - Neospora

- **Mycotic**
 - Aspergillosis

Bacterial Abortions

- *Brucellosis*
- Placenta -retained, **cotyledons necrotic**, red-yellow,; area between cotyledons thickened - LEATHERY
- Segregation and Culling

Bacterial Abortion

- **Campylobacteriosis**
- Placenta: mild placentitis, **hemorrhagic cotyledons** and an edematous intercotyledonary area.

Bacterial Abortions

- ***Leptospirosis***
 - abortion, stillbirth, weak calves
 - Serovar hardjo – carrier
 - Tetracycline can be used to treat acute infections
 - Control by limiting contact with wildlife and rodent

Diffuse placentitis with avascular, light tan cotyledons and edematous, **yellowish intercotyledonary areas**

Viral Abortions

- **Infectious Bovine Rhinotracheitis (IBR)-bovine herpes virus 1**
 - Secretions from reproductive organs-Contagious aerosol
 - Modified live vaccines - abortion.
 - Killed vaccine is available for vaccination of pregnant cows.

Viral Abortions

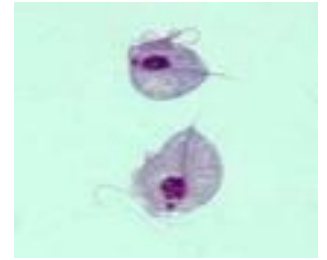
- **Bovine Viral Diarrhea (BVD)- MD**
 - Spread by aerosol or oral through fecal contamination.
 - Immunosuppressive – resistance decreases.
 - Congenital malformations such as cerebellar hypoplasia, ocular dysgenesis, and musculoskeletal defects may occur
 - Modified live vaccines - abortion.
 - Killed vaccines are available for vaccination of pregnant COWS.

Viral abortions

- **Epizootic Bovine abortion (Foot hill abortion)**
 - **Spread by aerosol or oral through fecal contamination.**
 - **Immunosuppressive – resistance decreases.**
 - **Congenital malformations such as cerebellar hypoplasia, ocular dysgenesis, and musculoskeletal defects may occur**
 - **Modified live vaccines - abortion.**
 - **Killed vaccines are available for vaccination of pregnant COWS.**



Protozoal Abortions



- ***Trichomoniasis (Trichomonas fetus)***
 - ***Venereal transmission – pyometra***
 - ***Abortion in 1st trimester***
 - ***Repeat breeding***
 - ***If abortion occurs in later gestation, diagnosis may be made by microscopic examination of fetal stomach contents***

Protozoal Abortions

- ***Neospora***

- Feed / water contaminated with dogs.
- Abortion occurs between 3-8 months of gestation
- Common fetal lesions include multifocal, necrotic, non-supportive encephalitis with mononuclear myositis and myocarditis
- Dam transmits to offspring for several generations

Mycotic Abortions

- *Moldy feed -Aspergillus fumigatus.*
- Respiratory or oral route.
- Retained placenta is a common.
- Ringworm-like skin lesions are very indicative of a mycotic etiology.



Clinical Management of Abortion

- Good Nutrition, Management
- Control of debilitating diseases – TB, JD
- Control of Specific diseases – Bact, Viral, Proto.
- Never try to stop the abortion process – P4
- If cervical dilatation, discharge – speed up by luteolytic agent, uterotonics- Ca, Oxytocin, DNS
- Appropriate supporting therapy
- Placental removal