



# Diseases and Complications of Pregnancy **Part-1** (**Hydroallantois and Hydroamnion**)

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# Diseases and Complications during Pregnancy

**“Numerous accidents and diseases occurs during the pregnancy”**

**Falls under following categories**

- **Conception failure (Early and late embryonic death)**
- **Injuries /trauma/rupture/ prolapse of genital organs (Uterus, vagina etc)**
- **Abnormal fetal development (monsters etc)**
- **Dropsy of the fetal membrane**
- **others**



## Conception failure and embryonic/fetal loss

### Etiology:-

- ✓ Environmental factor
- ✓ Genetic factor
- ✓ Congenital abnormalities and teratogens

### Sequelae:-

- ✓ Fetal maceration
- ✓ Fetal mummification
- ✓ Pyometra/metritis/endometritis/mucometra/hydrometra/peritonitis etc
- ✓ Infertility etc.



# **Injuries/trauma/rupture/prolapse/torsion etc of genital organs**

- ✓ Rupture of Uterus/cervix/vagina etc
- ✓ Rupture of large veins & arteries at parturition
- ✓ Prolapse of cervix and vagina
- ✓ Uterine Torsion
- ✓ Herniation of pregnant uterus
- ✓ Abortion due to trauma etc.



## Abnormal fetal development (monsters etc)

- ✓ Schistosoma reflexus
- ✓ Amorphus globosus
- ✓ Double headed fetus
- ✓ Conjoint Calves
- ✓ Hydrocephalus
- ✓ Calves with accessory organs (limbs etc)
- ✓ Arthogryposed fetus
- ✓ Calves with deficit organs (limbs etc)
- ✓ Calves with reduced/stunted growth of organs or body etc



## Dropsy of the fetal membrane

✓ **Oedema of the placenta**

✓ **Dropsy of fetal sacs**

✓ Hydro-allantois

✓ Hydro-amnion

✓ **Dropsy of fetus**

✓ Hydrocephalus

✓ Fetal ascites

✓ Fetal anasarca



## Others

- ✓ Superfetation
- ✓ Superfecundation
- ✓ Extra-Uterine Pregnancy
- ✓ Twin pregnancy in uni-perous animals
- ✓ Still birth
- ✓ Pregnancy pyometra/ Pregnancy with live & dead fetus simultaneously
- ✓ Incomplete cervical dilation of birth canal at parturition etc.



# Dropsy of the fetal membrane

## Oedema of the placenta

- Leads to placentitis
- Generally not causes dystocia
- Abortion and still birth may be

## **Etiological agents**

- Bacterial (*Brucella* spp.), Fungus, Virus, Protozoa etc.





# Dropsy of fetal sacs

- ✓ Hydro-allantois
- ✓ Hydro-amnion

## Hydro-allantois

- **Definition:-**sudden and excessive fluid accumulation in the allantoic cavity
- **Etiology:-**
  - Cystic, hydronephrosis or dysfunction of fetal kidneys,
  - Vit. A deficiency
  - Old age
  - Prior uterine infection etc



# Sign and Symptoms:-

## ▪ **Mild cases-**

- Fluid is moderate (40-80 liters)
- Clear watery and amber color fluid
- Fetal membrane is tough,
- Dystocia may be and fetus is usually dead

## ▪ **Sever cases-**

- Rapid development with in 5-10 days
- Distended uterus and enlarged abdomen
- Amount of fluid 80-120 lit.,
- Anorexia, lack of rumination, constipation
- Elevated pulse rate, restlessness, expiratory grunt, stiff gait,
- Animal lies on sternum (**bloated bull frog appearance**),
- Ventral hernia etc.



## Diagnosis:-

- **History**-sudden abdominal enlargement
- **Rectal Examination**-uterus is distended and tense, placentomes can seldom felt
- **Per-vaginal examination**- hand goes dorsally rather than ventral and stuck very near to vulva
- **Differential diagnosis**- Indigestion, Bloat, Traumatic gastritis, Hydroamnios etc.



# Treatment and Management:-

- Varies with severity and condition of animal
- Termination of pregnancy with excessive fluid therapy
- Cesarean section
- Supportive therapy
  
- Prognosis- Poor
  
- Sequelae- RFM, Septic metritis, infertility etc.



**Fig: Amber Color Discharge and Degenerated placentomes**



**Fig: Hydroallantosis**



# Hydro-amnion

- **Definition:-** Excessive accumulation of amniotic fluid in the amniotic cavity (20-120 lit.)
  
- **Etiology:-**
  - Genetic or hereditary causes like-
    - dexter calves
    - brachygnathic fetus
    - prolonged gestation
    - hydrocephalus fetus,
    - hybrid mating,
    - anencephaly etc.
  
  - Other causes- Vit deficiency etc.





## - Sign and Symptoms:-

- Develops slowly in several months
- abdominal enlargement (**pear shape** and less tense)
- Syrupy viscid fluid etc.

## ▪ Diagnosis:-

- Rectal examination- uterine horn palpable and not very tense, placentomes may be palpated





# Treatment and Management:-

- Induced parturition
- Cesarean section
- Supportive therapy- fluids, antibiotics, corticosteroids etc.
  
- Prognosis and :- Fair to good
  
- Sequelae:- Infertility and animal should be culled



# Differences b/w Hydroallantois and Hydroamnios

Prepared by Dr. Dushyant



## Hydroallantois

- Occurs in 85-90% cases of uterine dropsy
- Rapidly develops
- Abdominal wall is round and distended & tense
- Placentome and fetus not generally palpated
- Fluid is clear, watery and amber colour
- Fetus is generally normal
- Degenerated placentomes
- After removing of fluid regeneration of fluid occurs
- RFM and metritis is common sequelae
- Prognosis is poor

## Hydroamnion

- Occurs in 05-10% cases of uterine dropsy
- Develops slowly
- Abdominal wall is pear shape and less tense
- Placentomes and fetus palpated generally
- Fluid is syrupy and viscid
- Defective fetus generally
- Placentomes are normal
- Refilling of fluid not occurs after removal
- RFM and metritis generally not develops
- Prognosis is fair to good



**THANK YOU**

