EVALUATION OF EQUINE PLACENTA

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Placenta - structure

Fetal Chorioallantois

Maternal Endometrium

Placenta
Equine placenta

- Epitheliochorial
- Diffuse

Fetal-maternal contact area: 50 – 60 m²

Placenta or fetal membranes?

- Membranes that function for the protection or nourishment or respiration or excretion of a developing fetus

www.thefreedictionary.com/fetal+membrane

Equine placenta - roles

- Yolk sac
  - Early nutrition
- Amnion
  - Nutrient exchange
  - Protection
  - Waste
- Allantois
  - Waste
  - Gas exchange
- Chorion
  - Maternal interface
  - Nutrient exchange
Equine placenta - roles

- **Endocrine functions**
  - Estrogens from fetal Dehydroepiandrosterone (DHEA)
  - Progestagens – support pregnancy

Expulsion of equine placenta

- Time: approximately 30 minutes post partum
- > 3 hours – consider it retained!!!
- Prevent tearing by tying it up

Evaluation of placenta

- Time – immediately after foaling or ASAP
- Prevent from scavengers – bag it!
- Consider submitting it for a detailed evaluation by a veterinarian
**Evaluation of placenta**

- Shape – similar as gravid uterus
- Gravid horn usually larger and thicker than non-gravid horn
- Non-gravid horn thin and fragile – may tear easily!
- Weight at term approx. 11% of the weight of the fetus (2.2 – 6.4 kg)

**Evaluation of placenta**

- “Lazy F position”
- Completeness!!!
- Check tips of both horns!
- Weigh placenta

**Important!!!**

- Retention of even a very small piece of placenta can be deadly!
Check both sides of chorioallantois

- Gravid horn
- Non-gravid horn

Normal chorioallantois with patchy discoloration due to a short storage
Evaluation of placenta

- Avillous areas
  - Cervical star

- Previous location of endometrial cups
Evaluation of placenta

- Avillous areas
  - Areas overlying large vessels

- Fetal food PAD (placental area of degeneration)

Evaluation of placenta

- Allantoic side
  - Attachment of the umbilical cord - dorsal side of the base of one horn
Evaluation of placenta

- **Allantoic side**
  - Allantoic vesicles – accumulation of fluid around blood vessels
  - Allantoic pouches – necrotic remnants of the endometrial cups
  - Hippomane – collection of lipids, cells, blood cells, mineralized material

- **Umbilical cord**
  - Fetal side: one vein, two arteries and urachus
  - Allantoic (maternal side): two veins and two arteries

- **Evaluation of placenta**
  - Umbilical cord
    - Length: 32 – 90 cm in TB mares
Evaluation of placenta

- Umbilical cord
  - Less than five twists of the cord - normal

- Allantoamnion
  - Translucent
  - Amniotic plagues - amniotic metaplasia
Evaluation of placenta

- Ascending placentitis
  - Acute
  - Chronic

- Nocardia-form placentitis
  - Main affected area: ventral aspect of the gravid horn and junction of the horn and the uterine body

- Fungal placentitis
  - Thick, leathery cervical star
  - Diffuse, necrotizing, proliferating inflammation
Evaluation of placenta
- Allantoamnion

Thickening - inflammation  Meconium staining - fetal stress

Evaluation of placenta
- Umbilical cord
  - Torsion; more than four – five twists
  - Cord wrapped around a limb

Retained placenta: potentially deadly condition!
- Retained Fetal Membranes
  - > 3 hours considered retained
    - Medical emergency
  - Complete or partial
    - DO NOT PULL
    - Always save the placenta for evaluation!!!
Equine placenta is a wonderful organ but it could be a “deadly weapon”

Careful evaluation of equine placenta is crucial for a well being of a mare and her foal

The End!