Routine and Emergency Care of the Newborn Foal

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Overview

• The post-partum mare
• Newborn Foal normals
• Care for the newborn foal
• Signs of a Problem
• Time to Intervene

Before Foaling

• 30 Days Prior to Foaling
  – Vaccinate/ Deworm
  – Remove fescue pasture/hay from diet

• 14 Days Prior to Foaling
  – Open caslicks

Warning Signs Prior to Delivery

• Dripping milk
• Vaginal discharge

Warning Signs

• Premature mammary (udder) development
• Premature lactation
• Maternal malnutrition
• Prolonged gestation

Monitoring Foal Delivery

• Foaling Attendant
• Foal Alert, Inc $1000 - 2000
• Birth Alarm $1400
• Milk Predictor Kits
Foaling Kit

- Scissors
- Umbilical tape
- Umbilical dip
- Towels
- Bulb syringe
- Foal Resuscitator
- Oxygen
- Enema
- Thermometer
- Stethoscope
- Foal blanket
- OB gloves
- Lubricating Jelly
- Digital Clock

Foal Delivery

- Once you see membranes, the foal should be delivered in 20-30 min!

The 1-2-3 Rule

- One hour to stand
- Two hours to nurse
- Three hours to pass the placenta

The Mare

Red Bag

The Post-partum Mare

MARE CHECK LIST:
- Check placenta
- Check udder for milk
- Check vulva for trauma
- Monitor appetite, temperature, manure output

Evaluation of the Placenta

- Save placenta
  - Keep away from animals
  - All parts must be present
  - Look for abnormalities
Evaluate the Vulva

- Check for bruising
- Check for tears
- Monitor after foaling for discharge
- If off feed---take temperature!!

Remember the 1-2-3 Rule!

- **One** hour to stand
- **Two** hours to nurse
- **Three** hours to pass the placenta

Normal Placenta

Abnormal Placenta

Placentitis - Premature Foal

Retained Placenta

- Retained placenta > 4 hours is a medical emergency!
The Foal’s First Day

- Sternal 1-5 mins
- Standing in 1-2 hours
- Nursing within 2-3 hours
- Meconium passage – 4-6 hours
- Urinates within 9-10 hours

Newborn Foal Behavior

- Most foals nurse twice by 2½ hours of age
- Sleep by 1½-4 hours of age (mean 3 hours)
- First “play” by 2 hours of age
- Galloping observed by 6 hours of age
- Foals spend 33% of their life recumbent
  ~ Adults 5-10%

Newborn Foal Normals

- Temperature 99-102°F
- HR 80-120
- RR 20-40
- Pink gums
- Nursing 4-6 times per hour
- Fecal output 2-5 piles per day, pasty

Colostrum “First Milk”

- Critical for foal to receive to provide antibodies
- Foals need about 2 liters in the first 24 hours
- The first 2 hours of life are most critical
- Gut Closure

Got milk? Had Enough?

- Blood test
- Measures IgG (antibody)
  ~ Normal is >/= 800 mg/dl
- Sample at 8-24 hrs of age
- CBC also

Foal Restraint

- Do Not pick the foal up by the belly- can rupture the bladder

Correct restraint
**Foal Nutrition**

- Consume 21-25% of their body weight in milk daily (2.5 gallons day/-100 lb foal)

**Feeding Foals**

- Methods
  - Bottle or bucket
  - Feeding tube
- Don’t overheat milk
- Do not force feed a foal!!

**Umbilical Care**

- Betadine solution- light "tea" color (2%)
  - Do NOT use 7% iodine ---Burns the skin
- Nolvasan solution- use 0.5% solution
  - 1 part Nolvasan, 3 parts water
- Dip Navel 2-3 times the first day of life
- Check umbilical stalk for discharge daily

**Umbilical Problems**

- Excessive Bleeding
- Infection
- Patent urachus- Urine

**Care of the Foal**

Tetanus antitoxin

- Give tetanus antitoxin if the mare has NOT been vaccinated 30 days prior to foaling

**Foal Care - Enemas**

- May give in first few hours of life
- Fleet enemas
- Do not give repetitive enemas
Signs of a Problem – Meconium Impactions

• 1-2-3 Rule
• Dip the navel
• Administer enema
• Blood test 8-24 hrs of age-IgG

Not Enough Colostrum

• Foal becomes “septic” when bacteria enter bloodstream
• Clinical Signs
  – Weak, cold
  – Not suckling
  – Swollen joints
  – Diarrhea

Neonatal Diseases

• Neonatal Isoerythrolysis
• Sepsis
  – Pneumonia
  – Diarrhea
  – Joint infection
• Diarrhea
• HIE “Dummy Foal”
• Prematurity

What is Neonatal Isoerythrolysis (NI)?

• An acquired form of hemolytic anemia
• Most common alloimmune disease in foals 7 hours/12 days (median 2.5 days)
• The foal inherits a rbc antigen from the sire that is not possessed by the mare. The mare becomes sensitized (transplacental hemorrhage) to the incompatible alloantigen and produces antibodies to it.
• Antibody acquired by foal ingestion of colostrum
Clinical Signs of NI
- Dull and lethargic
- Pale yellow mucous membranes
- Tachycardia
- Tachypnea
- Cardiac murmur
- Dark yellow urine, hemoglobinuria in some
- Can be fatal in some
  - 3-7 days
  - Kernicterus

Prevention of NI
- Screen mares within 30 days of foaling
  - Alloantibody
- Jaundiced Foal Test at birth
- Blood test mares – breed negative mares to negative stallions
- Separation at birth
  - Until milk is clear; usually 24-36 hours
  - MILK OUT MARE
- Provide passive protection
  - Colostrum
  - Plasma

Warning Signs of a Problem
- Any discharge from nose

Warning Signs - Behavior
Strange Behavior or Not Nursing

Warning Signs – Check the Gums
- Blue/grey
- Yellow

Check the Eyes
Dehydration: sunken eyes
Entropion
Check the Legs

- Contracted tendons
- Relaxed tendons

Severe Deformities

Warning Signs – Joint Infection
- Any swollen joint or lame foal should be considered infected until proven otherwise!!

Sepsis Prevention
- Maternal health
- Environmental factors
- Adequate colostral intake
- Assessment of IgG
- Careful neonatal monitoring

Foal Diarrhea
- Noninfectious
  - Foal heat
  - Nutritional
- Infectious
  - Rotavirus
  - Parasites
  - Bacterial
- Any diarrhea is an emergency in the first few days of life!!

Neonatal Encephalopathy
- Other terms
  - HIE
  - Neonatal Maladjustment Syndrome (NMS)
  - Dummy foal
- Most common non-infectious medical condition of foals
Time to Intervene IF…
Foal is Born and Not Moving

- Call your vet
- Rub foal vigorously with towel
- Clear the nostrils of fluid
- Use foal resuscitator if not breathing
  - 20 breaths/min
- Chest compressions
  - 80-120 compressions/min

Foal Resuscitation

Time to Intervene

- 1-2-3 rule is Broken
- IgG Low
- Diarrhea in first few days of life
- Fever
- Behavior abnormal
- Colic
- Lame, swollen joint
- Call if doubts or questions!

Thank You

- Mark Shuffitt
- Marion County

PLEASE JOIN US!

- 2011 HEALTHY HORSES CONFERENCE
- Saturday, April 9, 2011 AT UF LA Hospital
- Lectures and demonstrations – poisonous plants, lameness evaluation, infectious disease, colic, non-sweating and more!
- Register online at:
  http://conferences.dce.ufl.edu/equine/
- Includes continental breakfast and hot lunch!

ANY QUESTIONS?