



THE PERIPARTUM PERIOD: MARE AND FOAL

KRISTI GRAN, DVM, DACVIM

OUTLINE

- Brief overview of prenatal care
- Parturition: normal vs abnormal
- Post partum care of mare
- Post partum care of the foal
- Setting mare and foal up for long term success



PRENATAL CARE OF THE MARE

- **The best bread comes from a well-kept oven!**
- Nutrition
- Vaccination
- Deworming
- Examination



PRENATAL CARE OF THE MARE: NUTRITION

- Good quality hay or pasture
- Balanced grain as needed
 - The mare will feed the foal first, then herself
 - Monitor body weight (rib cover, top line, rump, thighs)
 - Commercial feeds from reputable companies
- Dental care – examination, floating
- Deworming – fecal egg counts



PRENATAL CARE OF THE MARE: VACCINATION

For protection of the pregnancy

- Rhinopneumonitis
 - 3, 5, 7, 9 months
 - Abortions
 - Outbreaks

For protection of the foal after birth

- Foal is born with NO IMMUNITY
 - MUST come from mare, which means...
- 3-4 weeks prior to parturition
- Specific protection
 - Tetanus, West Nile, Strangles, Rotavirus
 - Tetanus antitoxin is often not available
- Overall immunity
 - “Wakes up” the immune system to fight general bacterial load

PRENATAL CARE OF THE MARE: EXAMINATION

- Brief evaluation at each vaccination time
 - Udder development/milk production
 - Vulvar discharge/lengthening/caslick's
 - Weight of mare
 - Time for discussion of any other concerns
- Palpation/ultrasound if warranted
 - High risk, history of abortion, history of placentitis



PARTURITION: PREPARATION

- What is the last breeding date/due date?
- What is THIS MARE's typical length of gestation?
 - And previous problems, if any
- A clean, bedded area for mare to lay down
- Veterinarian's phone number (AND PHONE)
- QUICK access to transportation
 - And know where you would go
- Would you do a c-section on this mare?
- Clean, dry towels
- Halter and lead rope
- Tail wrap
- Umbilical tape/clamp
- Naval dip
- SHARP scissors
- Exam gloves
- Enema

IMMINENT PARTURITION

- Udder development
- Waxing teats
- Changes in milk composition (calcium tests)
- Softening of area around tail head
- Lengthening vulva



PARTURITION: NORMAL

- Three stages of labor:
 - 1. Positioning of the foal in the birth canal
 - 2. Delivery of the foal
 - 3. Delivery of the placenta
- Parturition in the mare is FAST
 - Little room for problems
- Usually overnight

STAGE 1	STAGE 2	STAGE 3
Less than 4 hours	10-20 minutes	30min-3 hours
More than 4 hours	20-30 minutes	3-6 hours
More than 4 hours	More than 30 minutes	More than 6 hours

PARTURITION: STAGE I



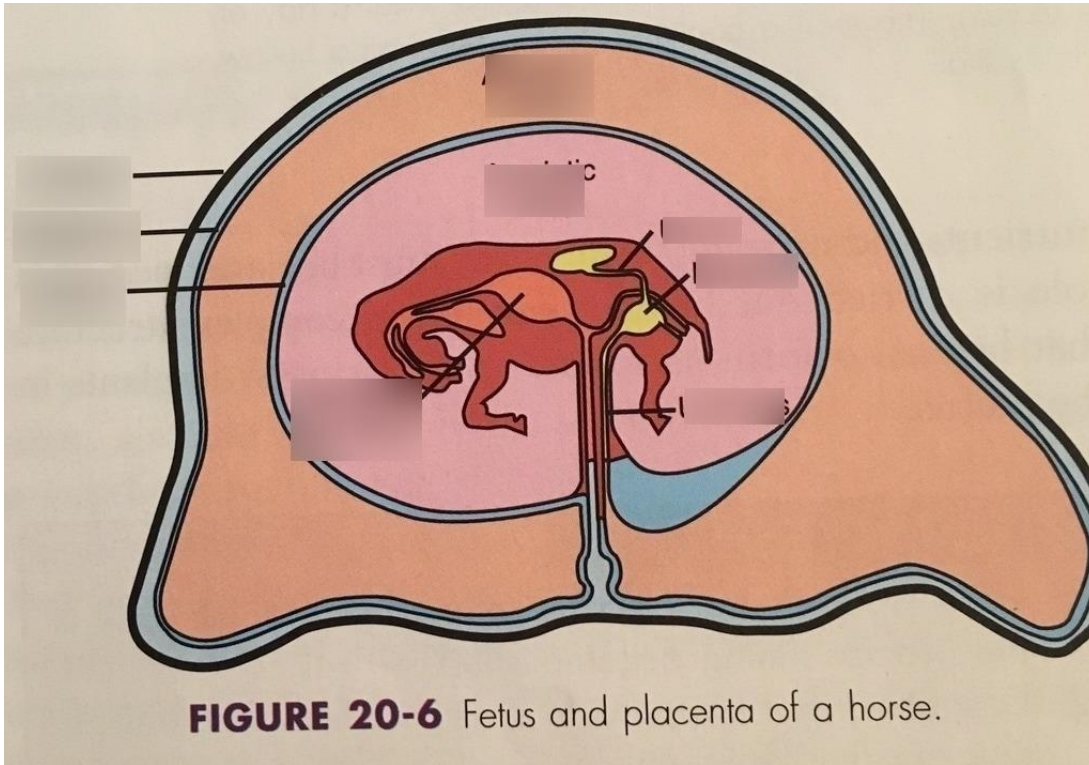
PARTURITION: STAGE 2



PARTURITION: STAGE 3



PARTURITION: RED BAG DELIVERY



PARTURITION: RED BAG DELIVERY

- Premature placental separation
- Foal will suffocate
- To save the foal, this is an OWNER fix
 - There is no time to get the vet there and still have a live foal
 - Sharp scissors – cut it open until water breaks
- Rarely have mare complications
- Often have foal complications
 - “Dummy foal”
 - May not show up right away



PARTURITION: DYSTOCIA

- Usually due to improper presentation
- Can be due to size of foal (not common)
- Can be due to congenital abnormality of foal

■ TIME IS THE ENEMY

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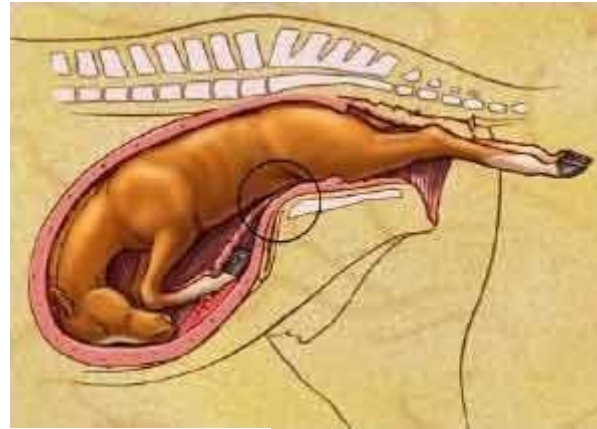
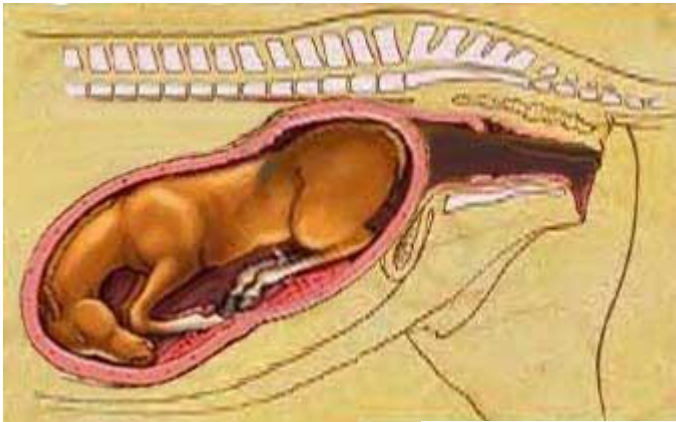
PARTURITION: DYSTOCIA

- Be familiar with how a foal should present and what that feels like
- Worth trying on your own:
 - One elbow back
 - Ankle knuckled under
 - One knee bent
- Worth loading up and heading to the clinic:
 - Head, no legs
 - Both knees bent
 - Tail or rump
 - WTF?

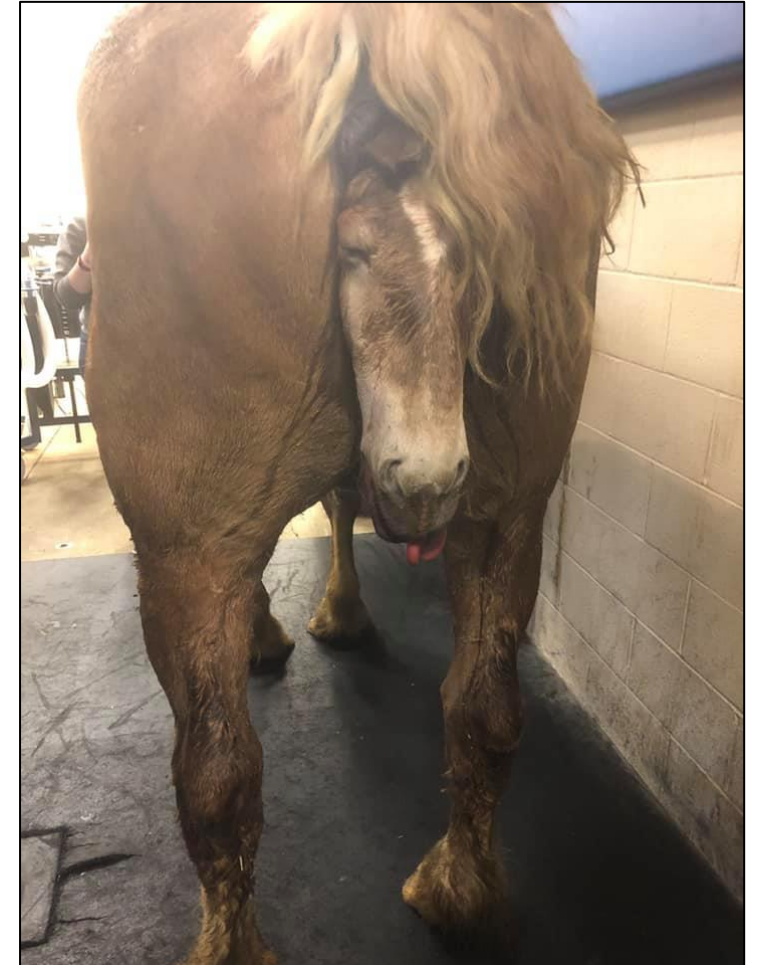


Sketched by Lisa of Painted Sun Miniatures

PARTURITION: DYSTOCIA



Sketched by Lisa of Painted Sun Miniature Horses



WHEN DO I CALL THE VET?

- Yesterday
- As soon as the question pops in your head
- If you see anything other than 2 legs and a nose
- If you've tried for 5 minutes and aren't making progress
- If the mare has been in labor for more than 10 minutes and isn't making progress

TIME IS THE ENEMY

DYSTOCIA MANAGEMENT

- IN HOSPITAL MANAGEMENT is best
 - General anesthesia in controlled environment with trained nursing staff
 - Hoist for gravity help
 - ICU for foal (and mare)
 - Less time (this is where you'll end up anyways if on farm isn't successful)
- **It is NOT CHEAPER to do this on the farm**



DYSTOCIA DO'S AND DON'TS

DO

- Call the vet ASAP
- Have transportation lined up
- Know your dates
 - And if checked for twins
- Have a plan if c-section is necessary
- Have a plan if foal is in critical condition
 - How far will you go?

DON'T

- Use anything other than a human to pull the foal
- Waste any time
- Ask your neighbor and your neighbor's neighbor to come try (unless they have a trailer)
- Stop for McDonald's
- Put anything in the uterus
- Give banamine in the muscle

DYSTOCIA MANAGEMENT: GOALS

- A live, healthy mare that can be rebred this season
- A live foal with minimal/manageable complications
- Minimal physical trauma to the humans
- This requires:
 - Speed and expertise in delivery
 - Minimal trauma in delivery
 - Pre-emptive planning
 - Aggressive and fast medical intervention
 - A lot of ibuprofen



POST PARTUM CARE OF THE MARE

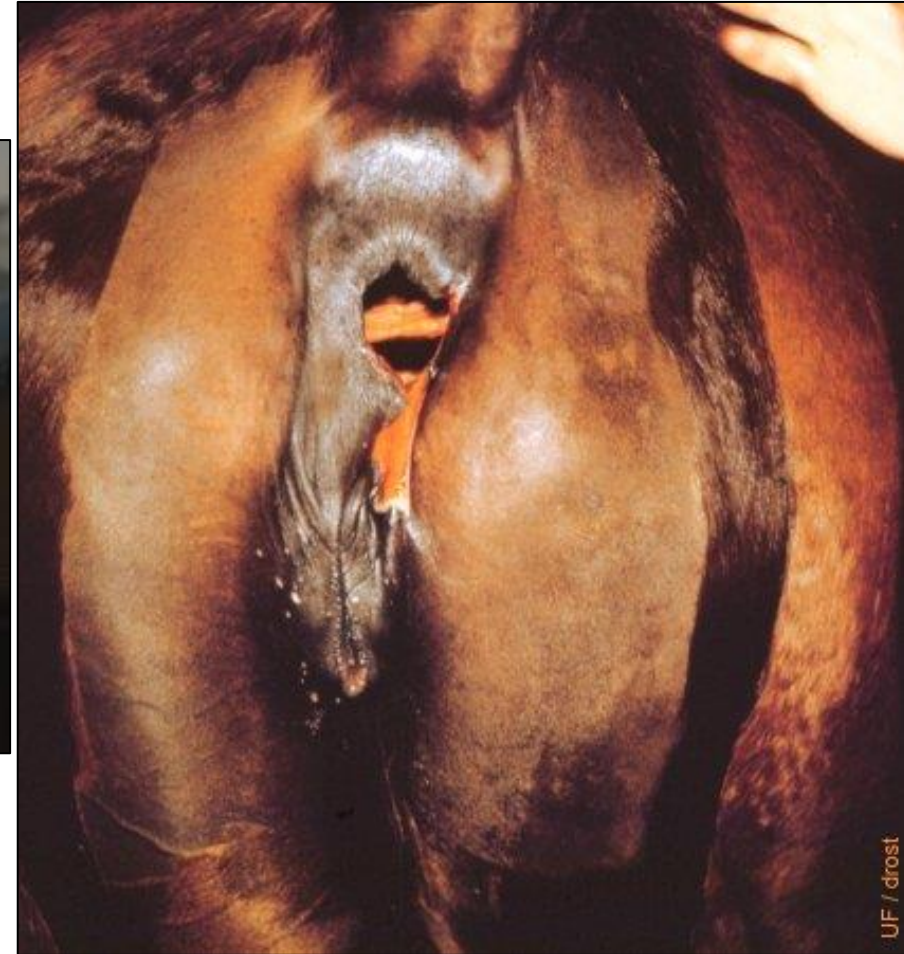
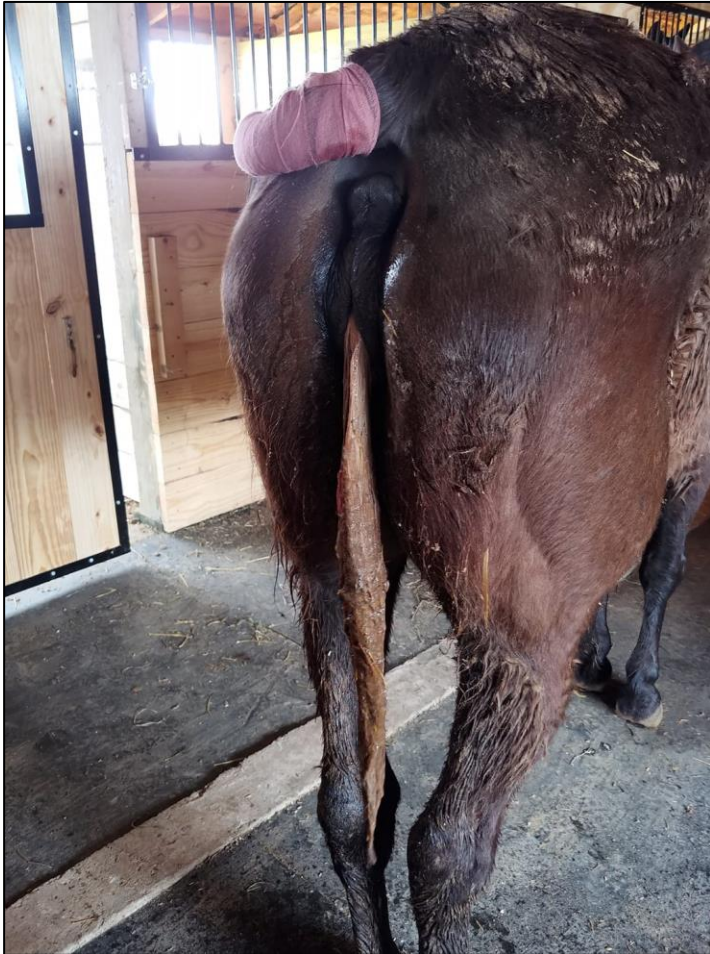
Exam within 24 hours:

- Adequate manure production and GI sounds
- Temperature (fever?)
- Heart rate, mucous membrane color
- Milk production
- Perineal trauma
- Mothering behavior
- Vitamin E/Selenium +/- prep for rebreed

Problems to be aware of:

- Retained placenta
- Large colon impaction
- Large colon volvulus
- Post partum hemorrhage
- Recto-vaginal tears
- Mastitis
- Peritonitis

POST PARTUM CARE OF THE MARE



WHEN DO I CALL THE VET?

RIGHT NOW!

- Placenta not passed within 3 hours
- Colic
- Down and won't get up
- Acting weak
- Won't accept the foal

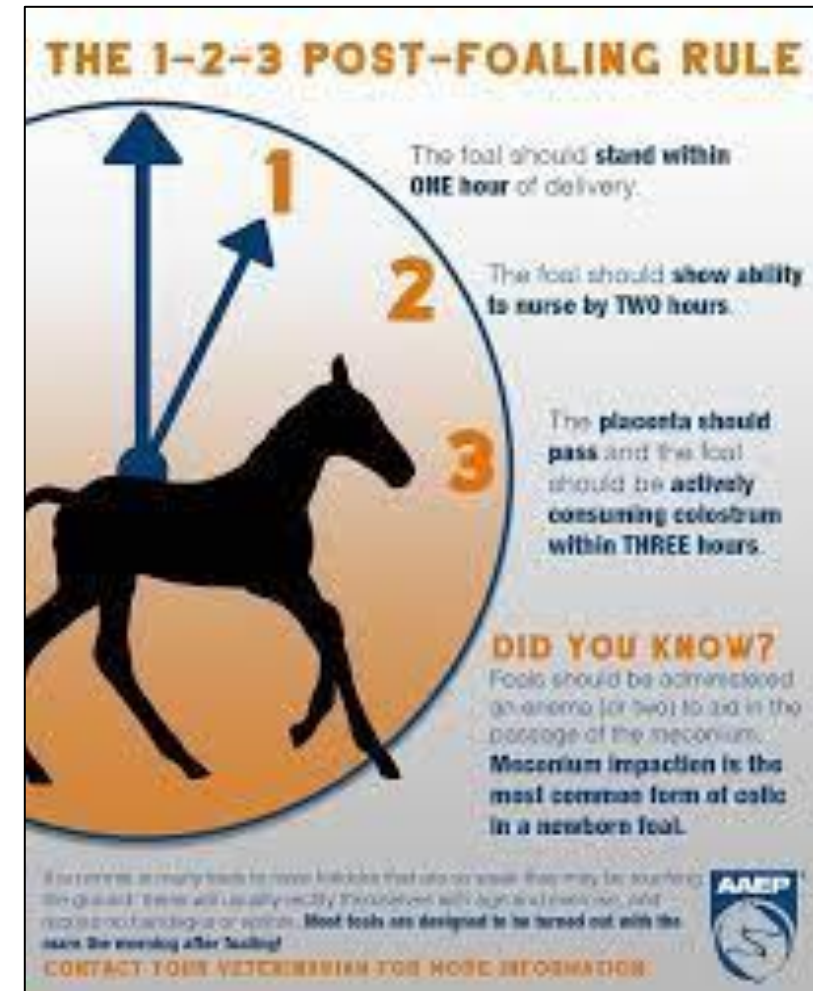
Wait until morning

- Perineal trauma

**IT IS NEVER WRONG TO CALL IF YOU
AREN'T SURE IF IT'S AN EMERGENCY**

POST PARTUM CARE OF THE FOAL: IMMEDIATE

- Standing within ONE hour
- Nursing within TWO hours
- Latching well, placenta passed within THREE hours
- Dip umbilicus w/ antiseptic
- Enema
- Vet check at 18-24 hours if no other concerns



VETERINARY EVALUATION OF NEW FOAL

PHYSICAL EXAMINATION

- Overall condition and behavior
- Evidence of dysmaturity
- Nursing ability
- Entropion, cataracts
- Cleft palate
- Heart and lung sounds
- Rib fractures
- Umbilical stump integrity
- Umbilical or inguinal hernias
- Flexor tendon laxity or contracture
- Passing of manure

TESTING/MEDICATIONS

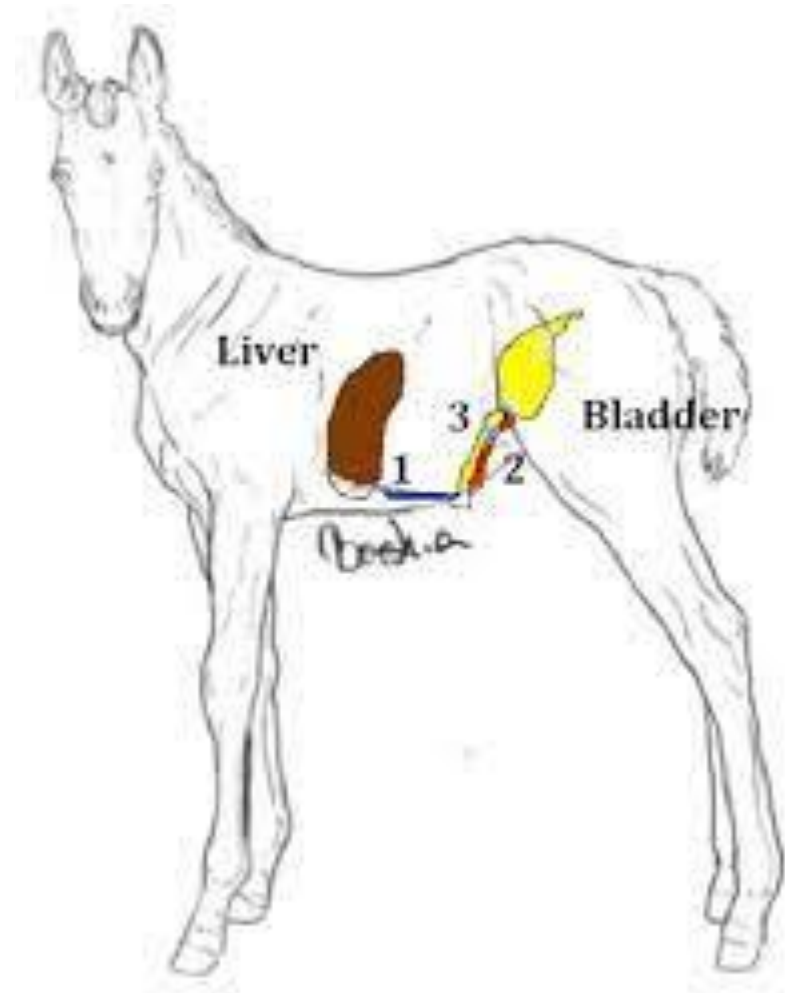
- Serum amyloid A
 - Can pick up infection within 24 hours of onset
- IgG
 - Measure of colostrum quality and quantity
- Enema
- Vitamin E/Selenium
- Antibiotics (?)

CONVERSATION: CONCERNS, QUESTIONS, PTSD

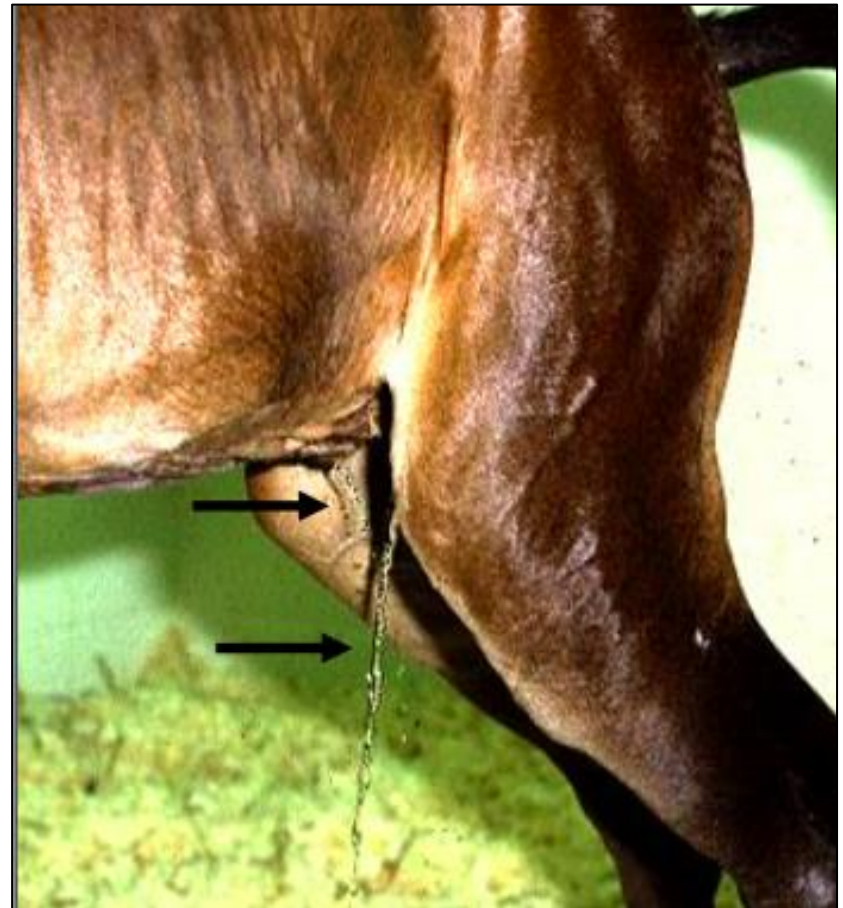
THERE ARE NO STUPID QUESTIONS

POST PARTUM CARE OF THE FOAL: UMBILICUS

- Do not cut at birth – mare will break it – this is necessary for vasospasm
- Umbilical tape, twine, suture if still bleeding
- Keep it clean – opening to body for infection
 - Antiseptic – dilute betadine (light tea color), chlorhexidine/alcohol
 - Twice per day x3 days or until dry
- **DON'T TOUCH IT WITH BARE HANDS**
- Any dripping, urination, wet after its been dry – report to DVM ASAP



POST PARTUM CARE OF THE FOAL: UMBILICUS



POST PARTUM CARE OF THE FOAL: UMBILICUS



POST PARTUM CARE OF THE FOAL: COLOSTRUM

- Foals are born with limited ability to fight infection
- Requires immunity to be transferred from the mare through the milk
- Three main places where things get messed up
 - Quality of colostrum
 - Quantity of colostrum
 - Timing of colostrum ingestion



QUALITY OF COLOSTRUM

- **VACCINATE YOUR MARES!!!**
- Highest risk of poor-quality colostrum
 - Unvaccinated mares
 - Maiden mares
- Nutrition
 - Improves quality of milk for growth
 - Does not change IgG level
- Serammune, other oral products – quality is not near good colostrum



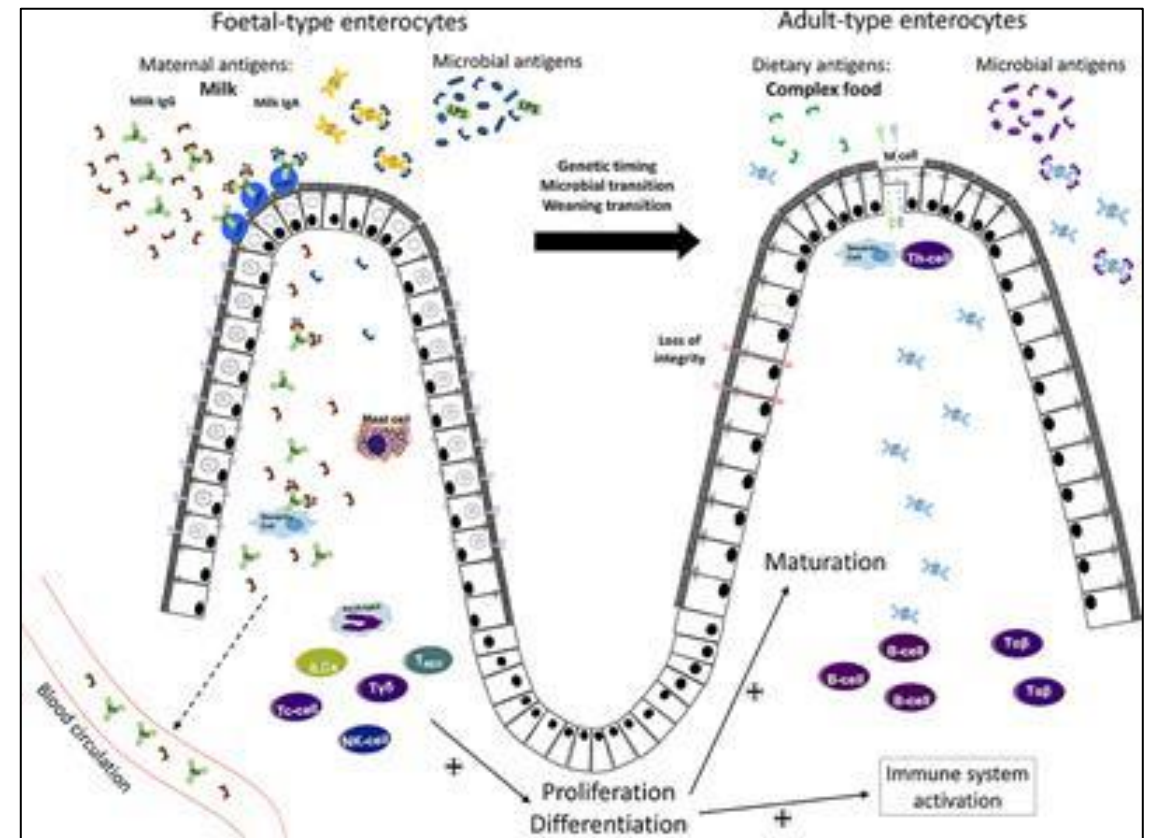
QUANTITY OF COLOSTRUM

- “First milk” – only produced for a finite period of time
- 2-3 quarts ideally within the first 6-8 hours of life
- Factors limiting quantity
 - Foal – won’t get up, won’t nurse, bottle feeding
 - Mare – leaking milk before parturition, lack of milk production



TIMING OF INGESTION

- Immunoglobulins are very large proteins
- Foal's gut has wide “openings” designed to let these proteins through
- Gut “closes” by 24 hours of age
 - 85% of absorption occurs within 6-8 hours and declines from there
 - Some disagreement
- This is why vet checks are traditionally at 24 hours



POST PARTUM CARE OF THE FOAL: THE FIRST FEW DAYS

- BEHAVIOR WILL CLUE YOU IN TO PROBLEMS BEFORE ANYTHING ELSE
 - Quieter, not as bouncy
 - Less nursing seen
 - Mare's udder full/dripping milk
 - Not reactive when stimulated
 - Staring at the wall
 - Trouble nursing when he was fine originally
 - TRUST YOUR GUT



DUMMY FOALS

- Neonatal maladjustment syndrome
- Hypoxic/ischemic encephalopathy
- Barker foals
- “Wimpy white boy syndrome”



- Result of oxygen deprivation either before or at birth
 - Dystocia
 - Placentitis
- Can affect any organ system
 - Brain most common
 - GI, liver

DUMMY FOALS

Immediate presentation

- Oxygen deprivation last few hours/days of gestation
- Won't get up
- Abnormal behavior overall
- Can't figure out nursing



Delayed presentation

- Oxygen deprivation at birth (dystocia)
- They were doing fine
- “Forgot” how to be a foal
 - Suddenly can't nurse (latch or find udder)
 - Staring at wall

DUMMY FOALS: MADIGAN SQUEEZE



DUMMY FOALS: MANAGEMENT

- Madigan squeeze
- Anti-inflammatory medications
- Neuro-supportive medications
- Supportive care
 - Tube feeding
 - Oxygen supplementation
 - IV fluids
 - Seizure management
- Outcomes vary



SEPSIS

- Highest risk foals: failure of transfer of passive immunity (colostrum)
 - But can happen to any of them
- Infection internalized through umbilicus, mouth, lungs
 - Will spread throughout the body and affect all organ systems
- Is deadly if not treated
- Antibiotics
- Supportive care: IV fluids, oxygen, heart support, GI support
- Outcome depends on severity, number of organ systems involved, quality and timing of vet care



SICK FOALS: IMPORTANT POINTS TO REMEMBER

- Minimize risk
 - Do IgG and SAA at 24 hours and manage abnormalities then (cost of plasma vs cost of sepsis)
 - CLEAN foaling stalls
- Foals go downhill fast – trust your gut
- Be aggressive early!
 - This is a race that we are already losing by the time we start
 - Trying lower level care first puts us farther behind
 - Don't self treat – some medications can do more harm than good
- What is your budget? Be honest and tell me!
- In hospital management does not always equal more expensive
 - And doesn't need to be reserved for just the sickest patients



WHEN DO I CALL THE VET?

- Most concerns about foals are a “call and be seen today” situation
- Any changes in nursing behavior or full udder on mare
- Colic
- Fever
- Diarrhea
- Swollen joints or lameness
- Wet umbilicus

**IT IS NEVER WRONG TO CALL IF YOU
AREN'T SURE IF IT'S AN EMERGENCY**

SETTING UP MARE AND FOAL FOR SUCCESS

- By the time the foal is 1 week old, you have spent money and time on:
 - Breeding the mare
 - Feeding the mare through pregnancy
 - Vaccinations (hopefully) and other veterinary care through pregnancy
 - Foaling the mare out
 - Neonatal vet checks
 - Any care that mare and foal needed post partum

- **DON'T STOP NOW!!!**



SETTING MARE AND FOAL UP FOR SUCCESS

- The single most important thing you can do for your horses is **VACCINATION**
- Keep mares up to date
- Start vaccinating foals at 4 months of age
- Remember boosters after initial series
- Continue vaccination annually or semi-annually based on what your vet recommends
- A “6 way” does not have everything you need
- Loss from a preventable disease is not just loss of the sale...its everything that came before



QUESTIONS?

- Kristi.gran@ckequinehospital.com
- 877-499-9909

