

New Practitioner Recipe Book

A stall side guide to help get you started 😊

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This “RECIPE BOOK” is designed to help get you started, get those wheels turning, with some ingredients to put the whole meal together. We have all been there when you get that call for an emergency and you think “Fudge buckets, how am I going to treat this?!?” Hopefully this will help make those moments a little easier.

FEW NOTES FOR USING THIS GUIDE:

- ❖ Many protocols are for the average 1100-pound horse. So please, if you have a 250 lb little nugget pony that you are treating, do the math to get the right dose!
- ❖ These cocktails are just suggestions, there are a million ways to do this job and do it well! This list is by no means exhaustive but just something that I did to help get me started when I was starting out in the trenches 😊
- ❖ This is intended to help triage in the field. REFERRAL IS ALWAYS A GREAT ANSWER!

A:

ANESTHESIA:

Medications: (For 1100 lb horse)

1. Premed:
 - a. Xylazine 5- 7 ml IV 1- 1.5 mg/kg IV
2. Induction:
 - a. Ketamine 11- 22ml IV 2.2 – 4.4 mg/kg IV
 - b. Diazepam 5 – 10 ml IV 0.05 – 0.1 mg/kg IV

Practice tips:

- ✦ Good rules of thumb: **Ketamine dose (100 mg/ml concentration) = 1 ml per 100 lbs + 3 ml**
 - So for instance, a average size 1000# horse would get 13mls of Ketamine (10ml + 3ml).
 - For **Diazepam, half your ketamine dose**, so if you are giving 13 ml of Ketamine, the horse would get 7 ml (6.5ml) Diazepam. For your of **Xylazine premed, match the volume for Diazepam** so a 1000# horse would get 6 ml Xylazine for premed.
- ✦ Draw up Ketamine and Diazepam separately until right before you go to induce just in case you end up canceling the procedure. It makes it a lot easier to keep track of your DEA's and put them back if you end up not using them.
- ✦ Bump with 0.5 - 2 ml Ketamine during procedure as needed.
- ✦ When you are in the last 15 minutes of procedure, bump with Xylazine 0.5- 2ml at a time.
 - This will help have a smoother/quicker recovery. Avoid giving more Detomidine close to recovery as this can make for an ataxic recovery.

ARYTENOID CHONDRITIS:

Inflamed arytenoids on endoscopy. May present with stridor, fever, respiratory distress.

Medications: (For 1100 lb horse)

1. Bute 2 grams IV 2- 6 mg/kg IV or PO, SID
2. Dexamethasone 40 mg IV 0.05- 0.2 mg/kg IV, IM or PO, SID
3. Antibiotics: **CHOOSE EITHER DOXY OR KPEN + GENT**
 - a. Doxycycline 10 mg/kg PO BID
 - b. Kpen 22,000 IU/kg IV QID
 - c. Gentamicin 6.6 mg/kg IV SID
4. Throat spray 20 ml topically via nasopharynx BID with...
 - a. **Throat spray mix=**
 - i. 1 gram Doxycycline
 - ii. 48 mg Dexamethasone
 - iii. 250 ml DMSO
 - iv. ¼ jar Nitrofurazone
 - v. 500 ml Aloe Vera Gel

Other considerations:

- ✦ Limit dust (spray down bedding, put on low dust bedding (shavings), wet down hay, no sweeping barn when horse is inside)
- ✦ Consider emergency tracheostomy depending on degree of inflammation in the airway.

B:



Baby horse

C:

CELLULITIS:

Pitting edema, limb hot and painful to palpation. +/- fever.

Medications:

Antibiotic: **CHOOSE ONE**

- | | |
|---|--|
| a. Oxytetracycline | 6.6 mg/kg IV slow SID |
| b. Ceftiofur CFA (Excede [®]) | 6.6 mg/kg IM 0 h and 96 h |
| c. PPG + Gent | 30,000 IU/kg IM BID + 6.6 mg/kg IV SID |

Bute 4 mg/kg IV or PO SID
Trichlormethiazide (Naquazone[®]) 0.44 mg/kg PO SID for 3 days
+/- Dexamethasone 0.05 – 0.2 mg/kg IV
+/- Regional limb perfusion SID to EOD (*see Regional Limb*)
Cold hose leg for 15 minutes TID- BID
Osmotic sweat on limb, with stack wrap if needed

In severe cases, consider adding the following medications:

- | | |
|---|--|
| 1. Clopidogrel (Plavix [®]) | 4 mg/kg PO SID loading dose, then 2 mg/kg PO SID |
| 2. Pentoxifylline (Trental [®]) | 7.5 mg/kg PO BID to TID |
| 3. Isoxsuprine HCL | 0.6 mg/kg PO BID |
| 4. Aspirin | 10 mg/kg PO SID or 17 mg/kg PO EOD |

Other considerations:

- ✦ Figure out possible inciting cause- dew poisoning/scratches? Small wound? PPID? etc
- ✦ Consider CBC and SAA to help monitor response to treatment
- ✦ Food for thought: There are many antibiotics that will be efficacious in treating most cellulitis cases. Oxytetracycline, in my hands, has been a good first line choice- it's relatively cheap, easy to give, well tolerated by most horses and seems to get 80% of the mild cellulitis cases that I have seen on the east coast. Other antibiotics commonly used include Ceftiofur CFA (Excede[®]), a combination of SMZ + Gentamicin, or PPG + Gent. I typically only go to Enrofloxacin (Baytril[®]) if there is poor response to treatment. If I do have to switch antibiotics, I try to get some probiotics into them 24 hrs. prior to the switch and then one 1 week after the switch to try and ward off antibiotic induced colitis.

CHOKE/ESOPHAGEAL OBSTRUCTION

Medications:

1. Acepromazine 0.02 mg/ml IV
2. Xylazine 0.3 ml/kg IV
3. +/- Detomidine 0.01 mg/kg IV
4. Flunixin (Banamine®) 1.1 mg/kg IV
5. Buscopan 0.3mg/kg IV once to relax smooth muscle
6. Antibiotics: **CHOOSE ONE**
 - a. Ceftiofur CFA (Excede®) 6.6 mg/kg IM at 0h and 96h
 - b. SMZ 30 mg/kg PO BID
 - c. +/- Metronidazole 15 mg/kg PO TID or QID (if worried about aspiration pneumonia)

Other considerations:

- ✘ **Don't be afraid to heavily sedate!** I strive for their head on the ground before I attempt to place a tube. This will help decrease the severity of aspiration.
- ✘ Consider oral/dental exam after resolution of choke.
- ✘ Watch for signs of aspiration pneumonia (have owners check rectal temp BID for 7- 10 days) and/or repeat obstruction (keep on soft diet 7- 14 days after choke).
- ✘ Consider putting on **Sucralfate (30 mg/kg PO TID)** to help with any esophageal ulceration.

COLIC:

Medications: *For average 1100 lb horse*

1. Flunixin (Banamine®) 10 ml IV 1.1 mg/kg IV
2. Buscopan 7 ml IV 0.3 mg/kg IV
3. Sedation:
 - a. Mild → Xylazine 1.5 ml IV (0.2- 1 mg/kg IV)
 - b. Moderate → Detomidine 0.5 ml IV (0.01- 0.02 mg/kg IV)
 - c. Severe → Detomidine 0.5 ml IV (0.01- 0.02 mg/kg IV)
Butorphanol 0.5 ml IV (0.01- 0.1 mg/kg IV)
4. +/- Rectal
5. +/- Nasogastric intubation
 - a. Reflux? → NPO
 - b. No reflux? → Admin 5- 8L Water + electrolytes

Practice tips:

- ✘ Do a good physical exam!
 - Fever? - Consider PHF, coronavirus or pleuropneumonia/respiratory infection as cause of colic.
 - Colic or Neurologic? Check mentation, cranial nerves, etc. Ask about vaccine status- Rabies? West Nile?
 - Hives on skin? Could horse be having an allergic reaction?
 - Just walked off horse trailer and blanket on? Could he be sweating underneath the blanket making him anxious/rolling?
- ✘ After I get a call about a colic, I will typically advise owners to take temperature first, then give a dose of Flunixin (Banamine®). Then, if safe, walk the horse for 15- 20 minutes. If the horse is still uncomfortable after that time frame, it is likely going to need veterinary intervention. Sometimes the Banamine and hand-walking will save you the farm call ☺ I still recommend the owners come out to check the horse every 1-2 hours for the next 12 hours just in case it decides to take a turn for the worse.
- ✘ When choosing sedation, for mild colic's I like to start with Xylazine (usually 1- 1.5 ml IV for 1000 lb horse) because it's fast onset and shorter duration of action. It will usually give you enough sedation to safely do a rectal and pass a

nasogastric intubation, but also does not sedate them too much so you can get an idea of just how painful they are. There is nothing worse than sedating a colic with Detomidine, your done the workup, horse still looks quiet, you go home, put your PJ's on and just about that time (usually 45- 1hr later) the Detomidine has worn off and now you have to go back out again. With xylazine, usually if they are going to blow through sedation and require more aggressive measures, you will know that within 15 minutes of your first exam and it may save you a second trip.

Other considerations:

- ✦ Consider running Hypertonic +/- LRS (this is a good thing you can do while waiting for transport- get a IV catheter in, give 1 L hypertonic and follow with 5L LRS/P-lyte.
- ✦ If shipping a very painful colic, consider giving a second dose of sedation IM (another 5 mg Detomidine + 5 mg Butorphanol) for trailer ride. Consider using 20mg Butorphanol SubQ (shown to be more bioavailable than IM).
- ✦ I will often tell the clients that I comfortable doing no more than 3 rounds of sedation/treatment on the farm. If the horse is still uncomfortable after that, then likely something more sinister is brewing, and referral or euthanasia should be considered.
- ✦ If the colic able to be well managed on the farm, here are some things I will often recommend to owner for at home care:
 - Medications to dispense:
 - Electrolyte paste
 - Probiotic paste
 - Omeprazole
 - Diet:
 - No food until normal feces is produced. Once pooping, start with ¼ ration normal diet, increasing by ¼ ration every day until back up to normal rations by day 4-5.

CONTRACTED TENDONS:

Medications: *For average 150 lb foal*

- | | |
|----------------------|---|
| 1. Oxytetracycline | 2 gr. IV SLOW (if using > 100 mg/ml concentration, put dose in 1 L-LRS)
once every 24- 48 hours for maximum of 3 doses. Make sure you know the
concentration of Oxytet (there is 200mg/ml and 100mg/ml) |
| 2. Firocoxib/Equioxx | 0.2 mg/kg IV once, then dose orally by weight SID |

Other considerations:

- ✦ Consider stall rest to avoid excessive contraction of muscles causing further contraction
- ✦ Consider splinting limb

D:

DIARRHEA

Practice tips:

- ✦ Start with a good physical exam. Fever? Think contagious (viral, Salmonella, Clostridial, PHF). Shocky gums with delayed CRT, consider colitis. BAR, no fever? Consider dysbiosis

Medications:

1. Flunixin (Banamine®) 1.1 mg/kg IV SID- BID
2. Probios 30 ml orally SID (Tractor supply carries this in their store so clients can easily pick this up to continue at home.)
3. Biosponge 1 tube PO SID
4. Electrolyte paste 1 tube PO SID
5. +/- Antibiotics (see below)
6. +/- IV Fluids 20 – 80 ml/kg bolus (10- 40 L for average 1100 lb horse)
60 – 75 ml/kg/day (30 L/day for average 1100 lb horse)

Other considerations:

- ✦ **Consider CBC/Chem +/- Fecal culture** to help aid antibiotic choice (Ie Metronidazole for clostridium? PPG + Gent for 2nd bacterial? Oxytet for PHF- Oxytetracycline 6.6 mg/kg IV slow SID. In endemic areas, anything that is colicky, with a fever and has loose stool, we routinely start Oxytetracycline.
- ✦ If shocky, consider **Hypertonic 1L IV (3 -4 ml/kg)** followed by 1- 40L LRS/P-lyte.
- ✦ If colicky, recommend passing NG tube. If no reflux, consider giving enteral fluids 5- 8L with electrolytes.
- ✦ Stall side blood work such as SAA and lactate can be very beneficial in determining how to treat these cases (antibiotics or no antibiotics, etc)
- ✦ For chronic, BAR patients with loose stool
 - Test for **sand** by putting small amount of feces in a rectal sleeve and adding water, let settle overnight. If sand, you will feel the grit at the end of the fingers in the glove. Start on psyllium/Sand clear.
 - Consider long term probiotic (Arenus Assure, Platinum Balance, etc) for chronic diarrhea
 - Consider trying food elimination test (ie avoid alfalfa for 2 weeks, avoid rye hay 2 weeks, etc)

DIARRHEA IN FOALS:

Medications: *For typical 150 lb newborn foal*

1. Antibiotics: CHOOSE A, B or C in combo w/ Amikacin
 - a. K Pen 3 ml IV QID 22,000 IU/kg IV QID of 500,000 IU/ml
 - b. PPG 3ml IM BID 20,000-40,000 IU/kg IM BID
 - c. Naxcel 5mg IV BID 5–10 mg/kg bwt i.v. or i.m. q. 6–12 h
 - d. Amikacin 6.6 ml IV SID 20 – 25 mg/kg IV SID of 250 mg/ml IV
2. Flunixin 1.5 ml IV BID 1.1 mg/kg IV BID of 50 mg/ml
3. Metronidazole 2 tabs PO TID 15 mg/kg PO TID of 500 mg tablet
4. Ranitidine 1.5 tabs PO TID 6.6 mg/kg PO TID of 300 mg tablet
5. Sucralfate 2 tabs PO TID 30 mg/kg PO TID of 1 gram tablets
6. Omeprazole 150 lb dose PO SID

DUMMY FOAL COCKTAIL

Medications: *For average 150 lb foal*

1. Dummy foal cocktail = 1 L- LRS with...
 - a. DMSO 30 ml
 - b. Vit B12 5 ml
 - c. Vit B Complex 10ml
 - d. CaCo-copper 10 ml
 - e. Vitamin C 10 ml
2. +/- Antibiotics: **CHOOSE ONE**
 - a. Ceftiofur CFA (Excede®) 1.5 ml SQ every 48 hrs
 - b. Ceftiofur Sodium (Naxcel®) 10 mg/kg IV, IM or SQ BID

E:

EIPH (Exercise-induced pulmonary hemorrhage)

Medications for prevention: *For average 1100 lb horse*

1. Furosemide (Lasix) 3- 5 ml (0.25- 1 mg/mg IV) 3-5 hours before work
2. Aminocaproic Acid 20 ml (5 grams) IV once 1-3 hours before work

Other considerations:

- ✦ Manage the environment:
 - Limit dust
 - Wet down hay. Feed hay on the ground.
 - Look for inciting cause- history of IAD? Upper airway disease?

ENEMA: for foals

Medications:

1. Enema mixture: Mix all items together
 - a. Warm tap water 150- 250 ml
 - b. Acetylcysteine 2% 6 grams (30 ml= 1 vial of the 200/mg/ml)
 - c. Baking soda 20 grams (~ 1 tablespoon)
2. Lubricate end of stallion catheter or red rubber. Pass 3-5 inches into rectum, hold rectum around tube (to prevent leakage) and use gravity flow to instill through the tube. Then stand back!

ESOPHAGEAL OBSTRUCTION: See choke

F:

FOAL MEDICATIONS IN EMERGENCY: For average 150 lb foal

1. Firocoxib/Equioxx 1 ml IV
2. Flunixin (Banamine®) 1.5 ml IV
3. Dexamethasone 2 ml (4 mg) IV
4. Epinephrine 0.5- 1 ml IV or IM (of 1:1000) every 5- 10 minutes
5. Doxapram 1 -2 ml IV (0.5 mg/kg IV) up to 3 doses at 5 minute intervals

FOAL ANAPHYLAXIS: (such as following plasma administration)

1. If RR increases/vitals change, stop administration, give...
 - a. Dexamethasone 2 ml (4 mg) IV
2. If gums turn white/brown, stop administration, give...
 - a. Epinephrine 1 ml IV
 - b. Dexamethasone 7 ml (14 mg) IV
3. After recovery give...
 - a. 1 L- LRS IV
 - b. Flunixin (Banamine®) 1.5 ml IV

FOAL SEDATION: *for average 150- 200 lb foal*









- ✦ For plasma administration: Xylazine 0.3 – 0.5 ml IV
- ✦ For farrier work Xylazine 0.5 ml IV or Detomidine 0.2 IV
- ✦ For painful procedure: Detomidine 0. 2 ml IV + Butorphanol 0.2 ml IV
- ✦ For seizing foal: Diazepam 1 ml IV + 0.5 ml Butorphanol IV
- ✦ For regional limb perfusion/jt. tap Detomidine 0. 2 ml IV + Butorphanol 0.2 ml IV

FRACTURE STABILIZATION:

Medications: *For average 1100 lb horse*

1. Bute	10 ml (2gram) IV	4- 6 mg/kg IV SID
2. Detomidine	0.5 ml (5 mg) IV, IM	0.01 mg/kg IV PRN
3. +/- Butorphanol	0.5 – 1 ml (5- 10mg) IV, IM	0.01 mg/kg IV PRN
4. +/- Ketamine	1- 2 ml (50- 100 mg)IV, IM	0.11 – 0.22 mg/kg IM or IV PRN

Bandage/Splint Considerations:

 Distal (below carpus/tarsus) →	Robert Jones +/- Cool cast +/- Kimzey
 Sesamoids →	Robert jones + Kimzey
 Condylar fracture →	Robert jones +/- Cool cast
 Spiral fracture distal limb →	Robert jones
 Suspensory/SDFT/DDFT breakdown →	Robert jones + Kimzey
 Carpal/tarsal bones fracture →	Robert jones
 Fracture above radius or tibia →	NO SPLINT, just bandage
 Olecranon/Triceps neuropathy →	Caudal and lateral splint

Side notes:

- If no Kimzey, use dorsal splint or bandage cast.
 - If splinting, bandage should not be too thick, as this will allow for extra unneeded motion
-

Other considerations:

- ✦ Consider placing catheter if have time and waiting for transport
- ✦ Work on safely cooling off horse while waiting for transport (ie if injury happen during race)

G:

GASTRIC ULCERS:

Medications:

- | | |
|-----------------------------------|---|
| 1. Omeprazole (squamous ulcers) | 4 mg/kg PO SID for 30 days, then 1 mg/kg PO SID for maintenance |
| 2. Sucralfate | 30 mg/kg PO TID for 10- 14 days |
| 3. Misoprostol (glandular ulcers) | 5micrograms/kg PO BID (LB) |

Other considerations

- ✦ Add a Fat Supplement
- ✦ Consider adding in alfalfa hay, high in Calcium- good natural buffer
- ✦ Allow for 24/7 grazing with increased turnout to help maintain a happy stomach
- ✦ Limit stress. Prior to high stress activities (shipping, race, horseshow, etc) consider giving Omeprazole 48 hours prior, during and 48 hours after a stressful event.

GASTRIC ULCERATION IN FOALS:

Medications:

- | | |
|---|---------------------------------|
| 1. Omeprazole solution | 0.5 mg/kg IV q. 24 (compounded) |
| 2. Sucralfate | 30 mg/kg PO TID |
| 3. Famotidine | 3 mg/kg PO BID |
| 4. Bethanechol | 0.07 mg/kg SQ TID |
| 5. 2 L- LRS IV q. 4 | |
| 6. 2 L- LRS w/ 50 ml Dextrose 50% IV q. 4 | |
| 7. Reflux q. 3 – 5 or PRN | |

Other considerations:

- ✦ Consider placing feeding tube or referring for parenteral nutrition.

GROWTH PLATE CLOSURES:

- ✓ Carpus (Distal radius) = **24 months** (recommended to check/correct at ~16 months)
- ✓ Fetlock (Distal metacarpus/tarsus) = **6 months** (recommended to check/correct at ~4 months)

H:

HEAT EXHAUSTION/COLLAPSE

Medications: *For average 1100 lb horse*

- | | | |
|---|-----------|--------------------------|
| 1. Flunixin (Banamine®) | 10 ml IV | 1.1 mg/kg IV |
| 2. Acepromazine | 3 ml IV | 0.02 mg/ml IV |
| 3. +/- Detomidine | 0.5 ml IV | Give if horse is panicky |
| 4. Keep applying cold water on heart and jugular veins. | | |

Other considerations:

- ✦ If horse does not cool down within 15 minutes (rectal temperature dropping 1 degree every 1- 3 minutes, 103°F by 15 minutes), consider running IV fluids

HEAVES

Medications:

- | | |
|---|---|
| 1. Flunixin (Banamine®) | 1.1 mg/kg IV SID- BID |
| 2. Dexamethasone | 0.05 – 0.2 mg/kg IV |
| 3. Clenbuterol | 0.5 – 2ml/100 lb PO BID (Start at lower dose, watch for excitation) |
| 4. Keep on tapering dose of dex (decrease by 5 mg every 3 days) then switch to oral pred or inhaled steroids (Flovent, Aservo, etc) | |

Other considerations:

- ✦ Keep in low dust environment
- ✦ Consider starting on longer term therapy's (inhaled corticosteroids, Prednisolone, etc)
- ✦ Consider metabolic testing prior to start systemic steroid medications

HORSE SHOW DRUGS: (USEF/FEI Approved substances as of 2021)

Medications: *for average 1100 lb horse*

- | | |
|-----------------------|----------|
| 1. Adequan | 5 ml IM |
| 2. Legend | 4 ml IV |
| 3. Traumeel | 2 ml IV |
| 4. Vitamin B12 | 15 ml IV |
| 5. Multivitamin shot: | |
| a. Vit B12- | 15 ml |
| b. Vit B Complex | 10 ml |
| c. CaCo-Copper | 10 ml |
| d. Vit C | 15 ml |

HIVES/Anaphylaxis:

Medications: *for average 1100 lb horse*

1. Dexamethasone 40 mg IV once (0.08 mg/kg IV), then taper as follows
 - a. Day 2 30 mg SID for 1 day
 - b. Day 3 20 mg SID for 1 day
 - c. Day 4 10 mg SID for 1 day
 - d. Day 5- 8 5 mg SID for 3 days
2. Cold hose
3. +/- Epinephrine 5 -10 ml IV of 1:1000 every 5-10 minutes
4. Triamcinolone (Kenalog) 10-20mg IM every 3-4 weeks for maintenance

Other considerations:

- ✦ Remove horse from inciting cause (straw? Bedding?).
- ✦ If metabolic, consider avoiding dex or limiting dose to 0.05 mg/kg and practicing avoidance of possible allergen.
- ✦ For needle shy or difficult patients, consider **Depo Medrol (Methylprednisolone Acetate) IM 0.5 mg/kg IM.**
- ✦ If chronic, look into adding Tri-hist or Platinum Allergy and Skin Supplement.

If reaction is severe leading to anaphylaxis, consider giving **Epinephrine 5- 10 ml IV of 1:1000 solution every 5- 10 minutes.**

HYPP (Hyperkalemic Periodic Paralysis):

Medications:

1. Karo syrup- lite 60-120 ml PO once, then PRN
2. Calcium gluconate IV 150 ml of 23% CaGlu into 1 L - 0.9% NaCl
3. Dextrose IV 100 ml of 50% Dextrose into 1 L - 0.9% NaCl
4. +/- Acepromazine 0.02- 0.07 mg/kg IV, IM, PO once
5. +/- Acetazolamide 2.5 mg/kg PO BID
6. +/- Sodium bicarb 150 ml Sodium bicarb into 1 L LRS

Other considerations:

- ✦ Avoid foods high in potassium such as alfalfa or brome hay, beet or sugar molasses. Feed balanced diet with 0.6 - 5% potassium. Avoid rapid feed changes, and test new hay to test for safe potassium levels
- ✦ Exercise horse regularly
- ✦ Consider genetic testing (N/H and H/H = Chance to be affected)

I:

IAD (Inflammatory Airway Disease): See Heaves. Similar protocol for triage, look for inciting cause. +/- Antibiotics

Inflammatory Foal/Weanling Pneumonia:

Medications: for average 150 lb foal

1. Ceftiofur CFA (Excede®) 1- 2 ml SQ q. 48hrs or IM 0h and 96h
2. Flunixin (Banamine®) 1.5 ml IV SID
3. Clenbuterol 1- 3 ml PO SID for 5 days
4. Dexamethasone taper (IV, IM or PO)
 - a. 5 mg SID for 1 day, then 4 mg SID for 1 day, then 3 mg SID for 1 day, then 2 mg SID for one day, then 1 mg SID for 1 day
5. **Nebulize**
 - a. Ceftiofur Sodium (Naxcel®) 2 mg/kg SID solution
 - b. Albuterol sulfate 0.025 mg/kg QID
 - c. Sterile saline (mucolytic) 2 -5 ml/50 kg QID

INTRAUTERINE THERAPIES

- ✦ Acetylcysteine 15 cc of 2% solution
- ✦ Timentin 60 cc
- ✦ Ceftiofur (Naxcel®) 1 – 2 grams
- ✦ DMSO 60 -120 ml in 3L Sterile saline flush

J:

JAUNDICE FOAL- Neonatal Isoerythrolysis:

Medications: *for average 150 lb foal*

1. Dexamethasone 10 mg IV
2. Flunixin (Banamine®) 1.5 ml IV
3. IV Fluids 1 L- LRS IV
4. Tube feed colostrum 0.5 – 1 Liter colostrum from NI negative mare with high IgG

Other considerations:

5. Pull foal off mare, muzzle foal until JFA (Jaundice Foal Agglutination) is negative.
 - a. Supplement foal: **250 -350 ml milk every 2- 3 hours**
 - i. Milk source can be either colostrum/milk from a safe donor (preferred), milk replacer or goats milk
 - b. Milk out mare every 1-3 hours, DISCARD MILK.

JOINT INJECTIONS:

1. Lubricant:
 - a. Hyaluronic Acid/HA 3 ml (1 vial)/joint
 - b. MAP 5™ 3 – 10 ml/joint
2. Steroid (commonly given with HA + Amikacin):
 - a. Betamethasone 3 - 12 mg/joint Max total body dose= 18 mg (0.04 mg/kg)
 - b. Triamcinolone 3 - 12 mg/joint Max total body dose= 18 mg (0.04 mg/kg)
 - c. Depo-medrol 40 – 120 mg/joint Max total body dose= 230 mg (0.5 mg/kg)
3. Antibiotics:
 - a. Amikacin 62.5mg/joint 62.5 mg= 0.25 ml of 250 mg/ml
4. Others therapeutics:
 - a. Polyacrylamide Gel (Noltrex®) 2.5 ml/joint
 - b. Polyglycan- HV® 2.5 ml/joint
 - c. Adequan® I.A. 250 mg/joint
5. Regenerative therapies (*given alone, not in combo with other therapeutics*):
 - a. IRAP 1- 8 ml/joint 1 week apart for 3 - 5 treatments, then PRN
 - b. PRP 1- 8 ml/joint or 3- 4 weeks apart for 3 - 5 treatments, then PRN
soft tissue defect
 - c. Prostride 1- 6ml/joint Single injection
 - d. Alpha-2 Macroglobulin (A2M) 3- 15 ml/joint Single injection
 - e. Stem cells (mesenchymal) 10- 50 mil units 1 month apart for 1- 3 treatments, then PRN

K:

KETAMINE STUN: For naughty ponies 😊

For average 1100 lb horse, in one syringe give the following IV:

1. Ketamine 100mg IV
2. Detomidine 5 mg IV
3. Morphine 40 mg IV

L:

LAMINITIS:

Medications:

1. NSAID: **CHOOSE ONE**
 - a. Flunixin (Banamine®) 1.1 mg/kg SID- BID
 - b. Bute 2 - 6 mg/kg PO BID for 14- 30 days
2. +/- Gabapentin 2.5 - 10 mg/kg PO- TID
3. +/- Acetaminophen 20 mg/kg PO SID- BID
4. +/- Butorphanol 0.01 - 0.1 mg/kg IM every 3- 6 hours PRN
5. +/- Ketamine 0.11 - 0.22 mg/kg IV or IM every 2-6 hours PRN
6. +/- Oxytetracycline 6.6 mg/kg IV (to help relax tendons- old therapy :)
7. +/- Pergolide 1 mg/1000 lb PO SID (for PPID)
8. +/- Metformin 30 -50 mg/kg PO BID- TID (for insulin dysregulation)
9. Cryotherapy: Ice feet 12- 24 hours on

Other considerations:

- ✦ If metabolically driven, consider bloodwork for Acth, Insulin, Glucose, Leptin, etc. If evidence of **insulin dysregulation** (high insulin) consider adding Metformin (10 - 30 mg/kg PO BID- TID) and/or Levothyroxine (0.5- 3 mg/100 lb PO SID)
- ✦ For coffin bone support until horse is stable enough for radiographic guided trimming/shoeing changes- place horse in lily pads, homemade insulation pads (buy sheet of 4" insulation from hardware store- trace hoof size- cut to size- duct tape to bottom of foot) or therapeutic boots (Cloud boots, soft rides, etc)
- ✦ Recommend owner limit all sugars: Soak hay (pull from water and then feed), no grain (ration balancer only), no sugar treats, consider testing hay
- ✦ In acute stages limit turnout/movement- keep in well bedded stall (consider sand or shavings that allow horse to find comfortable position)

LAWSONIA INTRACELLULARIS: in weanling

Medications: for average 750 lb weanling

1. Oxytetracycline 10 mg/kg IV SID for 5 days
 - a. then switch to Doxycycline 10 mg/kg PO BID for 14- 30 days
2. Flunixin (Banamine®) 0.5 mg/kg IV BID
3. Multivitamin shot
 - a. Vitamin B12 10 ml IV SID
 - b. Vitamin B Complex 10 ml IV SID
4. Aspirin 10 mg/kg PO SID
5. Omeprazole Dose per pound PO SID

Other considerations:

- ✦ If TP < 4 mg/dL and Albumin < 2 g/dL, consider giving Plasma and Hetastarch
 - **Hetastarch 1 L IV slow**, before giving Plasma
 - **Plasma 2 L IV SLOW** over 10-20 minutes
- ✦ Monitor CBC/Chemistry closely to watch protein levels

LIVER/HEPATITIS/CHOLANGIO-HEPATITIS: For average 1100 lb horse

Medications: for average 1100 lb horse

1. Sulfa/Trimethoprim (Equisul-SDT®) 3 ml/100 lb PO BID
2. Flunixin (Banamine®) 0.5 mg/kg IV BID
3. Dexamethasone tapering dose 40 mg once, then taper...
 - a. 6 ml IM SID for 4 days, then 5 ml IM SID for 5 days, then 4 ml IM SID for 5 days, then 3 ml IM SID for 5 days, then 2 ml IM SID for 5 days, then 1 ml IM SID for 5 days
4. Pentoxifylline 7.5 mg/kg PO BID to TID
5. Platinum Liver Supplement 1 scoop PO BID
6. Vit E/Nano E 10,000 units PO SID
7. SAM-E 8,000 mg PO SID
8. Platinum Healthy weight Top dress 2 pumps on grain OR syringe feed
9. Probiosis 2 scoops PO BID
10. Omeprazole 1/4 tube PO SID
11. +/- Ursodiol 15 mg/kg PO SID

Other considerations:

- ✦ FEED: Avoid high protein foods such as alfalfa or highly concentrated grains. Lower protein foods like senior grains and timothy/orchard hay are preferred, along with healthy fat supplements such as Rice brain or Platinum Balance healthy weight.

LYME:

Medications:

1. Oxytetracycline 6.6 mg/kg IV SID for 7- 10 days , then oral Doxycycline
 - a. Doxycycline 10 mg/kg PO BID for 14- 30 days
2. Flunixin (Banamine®) 1.1 mg/kg IV SID- BID

M:

MESOTHERAPY

Medications: (= Total body dose. Split into number of syringes needed- I usually divide into 2 syringes)

- | | | |
|---------------------|-------------|-------------------------|
| 1. Dexamethasone SP | 40 mg | 20 mg/syringe |
| 2. Traumeel | 2 vials/4ml | 1 vial per side/syringe |
| 3. Carbocaine | 20 ml | 10 ml/syringe) |
| 4. Vit B 12 | 20 ml | 10 ml/syringe |

MULTIVITAMIN INJECTION:

In one syringe, combine the following. Administer IV:

- | | |
|---------------------|----------|
| 1. Vit B12 3000 mcg | 15 ml IV |
| 2. Vit B Complex | 10 ml IV |
| 3. CaCo-Copper | 10 ml IV |

N:

Newborn foal exam:

- Check for FPT (Failure of passive transfer= IgG < 400 mg/dl)
- Check for entropion.
- Check ribs. Feel for any crepitus or movement along every rib.
- Look at placenta- should weight ~ **10% bodyweight**
- Check umbilicus. Should be dry.
- Check joints/limbs. Look for heat/swelling/lameness/ALD (angular limb deformity)
- Check for cleft palate
- Check for congenital cataracts

NUTRITION:

- ✦ Total caloric intake= 30 kcal/kg/day
- ✦ Forage intake should account for 2-3 % of body weight/day
 - Average horse should eat ~ 20 lb/hay/day

O:



Equine Eye.

P:

POTOMAC HORSE FEVER: Think triad of signs- Fever, colic and laminitis

Medications:

- | | |
|-------------------------|---|
| 1. Oxytetracycline | 6.6 mg/kg IV SID for 7- 10 days , then oral Doxycycline |
| a. Doxycycline | 10 mg/kg PO BID for 14- 30 days |
| 2. Flunixin (Banamine®) | 1.1 mg/kg IV SID- BID |
| 3. Probiotic | Varied |

Other considerations:

- ✦ Consider icing feet.
- ✦ Consider gastroprotection's (Omeprazole, etc)
- ✦ Monitor CBC/Chem

Q:



Quarter Horse

R:

RACEHORSE PRE RACES: ARCI as of Dec. 2021

Medications: for average 1100 lb Racehorse

1. Bute 10 ml IV 48 hours out (no additional NSAIDS can be given)
2. Flunixin 10 ml IV 48 hrs out (no additional NSAIDS can be given)
3. Ketoprofen 10 ml IV 48 hrs out (no additional NSAIDS can be given)
4. Estrone 10 ml IM or IV 24 to 48 hrs out
5. ECP 5 ml IM 24 to 48 hrs out

6. Electrolyte "Vitamin" Jug. 1-L LRS w/
 - a. Vit B12- 15 ml
 - b. Vit B Complex 10 ml
 - c. CaCo-Copper 10 ml
 - d. +/- DMSO 50 ml with DMSO 48 hrs out
without DMSO- 24 hrs out

7. Multivitamin shot IV 24 to 48 hrs out
 - a. Vitamin B12 15 ml
 - b. Vit B Complex 10 ml
 - c. CaCo-Copper 10 ml

8. Polyglycan® 5 ml IV 24 to 48 hrs out
9. Adequan® 5 ml IM 24 to 48 hrs out
10. Legend® 4 ml IV 24 to 48 hrs out
11. Acetylcysteine 2% 15 ml IV 24 to 48 hrs out

REGIONAL LIMB PERFUSION:

CHOOSE ONE, reconstitute into 20- 60 ml sterile saline, give slow IV with tourniquet"

1. Amikacin 2 grams (8 ml of 250 mg/ml) IV
2. Gentocin 1 gram qs to 60cc leave tourniquet on for 20 minutes, give rest of dose systemically

Other considerations:

- ✦ DO NOT LEAVE tourniquet on for more than 30 minutes
- ✦ RLPS may be performed SID or EOD, typically for 1-5 treatments total

REPRO CHECKS TIMELINE:

- ✓ Day 0: Check for ovulation. Consider post breeding lavage
 - **Post Breeding Lavage:** 4- 6 hours post breeding. 3L Sterile Fluid Lavage followed by intrauterine infusion of 1 g. Ceftiofur (Naxcel®) +/- Estrumate 1 ml IM (ecbolic agent)
- ✓ Day 14: Check for fetus.
 - If in foal ☐ Pull blood for P4.
 - If twins ☐ plan to check back in 2 days for possible twin pinch
 - If open, get Culture and Cytology. Consider uterine lavage + intrauterine infusion of Acetylcysteine 15 ml of 2% solution.
- ✓ Day 16: Twin check. If having to pinch twins administer...
 - Flunixin (Banamine®) 1.1 mg/kg for 3 days
 - Progesterone supplementation until heartbeat check at 28 days
- ✓ Day 21: Recheck
- ✓ Day 28: Heartbeat check
- ✓ Day 35: Check for pregnancy before placentomes form
- ✓ Day 60: Size of hamster. Fetal sexing (can usually be performed anywhere between 50- 70 days)
- ✓ Day 90: Size of cat
- ✓ Day 120: Size of small dog/Beagle
- ✓ Day 240: Size of lamb. Should be able to feel foal move.
- ✓ Day 310: 1 month out from foaling.
 - Open Caslick. Pull blood for NI (Neonatal Isoerythrolysis) Screen.
 - Give pre-foaling shots (typically all annual vaccines, especially Rabies and Tetanus)

REPRODUCTIVE CYCLE MANIPULATION THERAPIES:

Medications: for average 1100 lb broodmare

- ✘ Estrumate/Prostin 1- 1.5 ml IM (Short cycle- check back in 5 days OR use as ecbolic agent)
- ✘ Sucromate/Deslorelin 1 ml IM (Ovulation w/in 38 hrs of administration)
- ✘ hcG 2.5 ml IV (Ovulation w/in 48 hrs of admin. Follicle must be > 30 mm to work)
- ✘ Buserelin 0.5 ml SQ q. 12 until ovulation (Follicle must be > 20 mm to work)

RHODOCOCCUS FOAL:

Medications: for average foal

1. Rifampin 5 mg/kg PO BID
2. CHOOSE 1 ADDITIONAL ANTIBIOTIC:
 - a. Doxycycline 10 mg/kg PO BID
 - b. Azithromycin 10 mg/kg PO SID
 - c. Clarithromycin 7.5 mg/kg PO BID
3. Firocoxib (Equioxx®) Dose per weight PO SID
4. Omeprazole Dose per weight PO SID

Other considerations:

- ✘ Foals will usually require over 30 days of treatment. Recheck SAA every week, once SAA is WNL, treat for one more week
- ✘ If performing screening U/S, generally assume that if total abscess size is over 7 mm, start treatment

S:

SEPTIC FOAL STABILIZATION:

Medications: *For average 150 lb foal*

1. Ceftiofur Sodium (Naxcel®) 10 mg/kg IV, IM or SQ BID
2. Amikacin 20 – 25 mg/kg IV SID
3. Firocoxib 2.25 ml IV SID (0.3 mg/kg once, then 0.1 mg/kg SID thereafter)
4. IV Fluids- LRS/P-lyte 1 Liter IV q. 6 20ml/kg initial bolus (1.5 L IV bolus)
100 ml/kg/day maintenance (5L/day for average 150 lb foal)
5. +/-Polymyxin 3 vials of 500,000 units/vial (1,500,000 units) in 1 L LRS bag IV QID

SEPTIC JOINT PARAMETERS:

- ☠ WBC > 30,000 with 80-90% degenerative neutrophils. (Anything less than 20,000 can be considered inflammatory)
- ☠ Total Protein > 4.5

STEEPLECHASE/EVENTING COMPETITIONS (Dosing for average 1100 lb horse)

Have 1 SYRINGE of each ready to go.

1. Flunixin 10 ml (500 mg) IV
2. Bute 10 ml (2 g) IV
3. Dexamethasone 10 ml (40 mg) IV
4. Detomidine 0.5 ml (5 mg) IV
5. Butorphanol 0.5 ml (5 mg) IV
6. Acepromazine 2 ml (20 mg) IV

Have handy: Euthasol, Ketamine + Diazepam (Quick GA= 5-7 ml Xylazine as pre med, 15 ml Ketamine + 7 ml Diazepam as induction), CMPK Oral Gel, Bandage materials, IV Fluids, IV Catheter, suture materials

SESAMOIDITIS: In yearlings

Medications

1. Aspirin 10 mg/kg PO SID or 17 mg/kg PO EOD
2. Isoxsuprine 1 mg/kg PO BID
3. Adequan 5 ml IM SID every 4 days for 7 treatments, then once a month thereafter

SPL (Sub palpebral lavage):

Medications:

1. Voriconazole (1%)(o/s) 0.1ml via spl QID
2. Ofloxacin (0.3% o/s) 0.1ml via spl QID
3. Cefazolin 0.1ml via spl QID
4. Serum 0.1ml via spl QID
5. Atropine 0.1ml via spl SID – EOD for 5 days, then stop
6. Flunixin 1.1 mg/kg IV, PO SID

Other considerations:

- ✦ Wait 5 minutes between administration of eye medications
- ✦ **How to Mix up Cefazolin o/s:**
 1. Add 3 ml of Sterile Water to 1 gram bottle of Cefazolin powder
 2. Then add 15 mls of artificial tears solution to bottle
 3. This will make 18 ml of Cefazolin ophthalmic solution (56 mg/ml)

STRANGLES:

Medications:

1. Flunixin (Banamine®) 1.1 mg/kg IV SID- BID
2. +/- Antibiotics: **CHOOSE ONE**
 - a. Cefitfor CFA (Excede®) 6.6 mg/kg IM 0h and 96h
 - b. SMZ (Sulfa/Trimethoprim) 30 mg/kg PO BID

Other considerations:

- ✦ Quarantine away from herd.
- ✦ Antibiotics or no antibiotics?
 - If just swollen glands, and snots (not clinically sick with coughing, high fever, etc) □ consider quarantine and NSAIDS PRN for fever.
 - If horse has fever, snotty nose, dull □ considers systemic antibiotics, scoping and flushing guttural pouch

T:

TENDONITIS/DESMITIS:

Medications:

1. Bute 2.2-4.4 mg/kg IV or PO SID
2. +/- Trichlormethiazide (Naquazone®) 0.44 mg/kg PO SID for 3 days (10 ml PO SID)
3. Support bandage on affected limb

Other considerations:

- ✦ RICE= Rest, Ice, Compression
- ✦ Consider cooling leg down before scanning (wait 2-3 days).
- ✦ The number of letters in the word= number of months off
 - T E N D O N= 6 letters= 6 months off
 - L I G A M E N T= 8 letters= 8 months off

TIE UP/RHABDOMYOLYSIS:

Medications: For average 1100 lb horse

1. Flunixin (Banamine®) 10 ml IV (500 mg) 1.1 mg/kg IV SID- BID
2. Acepromazine 1- 3 ml IV (10- 30 mg)
3. +/- Methocarbamol 25 ml (2500 mg) IV 5 – 25 mg/kg IV slow
4. +/- IV Fluids- LRS 10- 40 L IV depending on severity

Other considerations:

- ✦ CK < 350 IU/L, AST < 450 IU/L = Banamine, Ace + Rest
- ✦ CK > 400 IU/L, AST > 500 IU/L = All the above + IV Fluids (10- 40 L bolus + maintenance)
- ✦ Consider starting on **Dantrolene 4ml/1000 lb** horse starting dose
- ✦ Consider further testing for PSSM, Vitamin E. and selenium

THUMPS:

Medications:

1. Flunixin (Banamine®) 1.1 mg/kg IV SID- BID
2. Detomidine 0.5 ml (5 mg) IV
3. Calcium: **CHOOSE ONE**
 - a. CMPK Solution 250- 500 ml IV Slow
 - b. Calcium gluconate 250 ml in 5L bag given at fast drip
4. Electrolytes Varied

U:

ULTRASOUND VALUES for abdomen: Following are within normal limits

- | | |
|---|-------------------------------------|
| <input type="checkbox"/> SI Wall thickness | Duod/Jej < 0.3 cm
Ileum < 0.5 cm |
| <input type="checkbox"/> SI Loop diameter | < 3 cm |
| <input type="checkbox"/> LI Wall thickness | < 0.4 cm |
| <input type="checkbox"/> Cecum wall thickness | < 0.4 cm |
| <input type="checkbox"/> Stomach- ICS | 8 – 13 ICS |
| <input type="checkbox"/> Stomach wall thickness | < 1 cm |

UMBILICAL INFECTION:

Medications: For average 150 lb foal

- | | |
|------------------------------|-------------------------|
| 1. Ceftiofur CFA (Excede®) | 6.6 mg/kg IM 0h and 96h |
| 2. Broader spectrum therapy: | |
| a. Rifampin | 5 mg/kg PO BID |
| b. Amikacin | 20 – 25 mg/kg IV SID |

UTERINE HEMORRHAGE:

Medications: For typically 1100 lb broodmare

- | | |
|--------------------------|-----------------------------------|
| 1. Sedation | |
| 2. Flunixin (Banamine®) | 10 ml IV |
| 3. Naloxone | 10 ml IV 12 – 20 mg IV Bolus |
| 4. Aminocaproic Acid | 6 vials in 1L- LRS IV once |
| 5. +/- Formalin | 30 ml of 10% Formalin in 1 L-LRS |
| 6. +/- IV Fluids | 1- 10 L IV |
| 7. +/- Blood transfusion | |

Other considerations:

- Keep mare calm. Turn off lights, give repeated rounds of sedation as needed.

V:

W:

X:

Y:

Z:

TRICKS OF THE TRADE:

“Be like a duck- Calm on top but paddle like hell under the surface”

- Steve Berkowitz, VMD

If your not sure of what to do, do a super thorough physical exam- just take an extra couple minutes to listen to the heart and use that time to come up with your next step OR tell your client “I’m just going to run to the truck to grab a different thermometer, I don’t think this one works” and use that time to look it up or phone a friend!

- Elizabeth Crook, DVM

When tubing a horse, if they start to flip their head up and down while tubing, say out loud “if you keep doing that you'll give yourself a bloody nose!” so if it does happen, the owners aren’t as surprised

- Chuck Arensberg, VMD