



From the horse's mouth

A Newsletter from Paton and Martin Veterinary Services

www.pmvetservices.com



Colic – A panic experience?

The fall is a time of change, which is possibly a risk factor for your horse developing colic. Although the word “colic” may seem daunting and sending shivers down your spine we are reviewing some of the most common reasons and taking you through the experience of what to do in the initial stages of colic. (More in pages 3-4)

How important are your horse's teeth?

Drs. David Paton and Eric Martin attended a recently held advanced dentistry seminar and wetlab. A fellow from the Academy of Equine Dentistry, Dr. David Klugh, imparted a seminar in Lynden, Washington. Equine dentistry has progressed dramatically over the last 30 years. Gone are the days of grinding away in the mouth with hand held instruments on unsedated horses without the benefit of a thorough exam with a full mouth speculum. (More in page 6)



Dr. Cruz presents at international meeting

Our board-certified surgeon, Dr. Cruz gave a couple of talks to a room packed of veterinarians at the American College of Veterinary Surgeons (ACVS) Annual Scientific Symposium recently held in Washington, DC. The topics were post-traumatic osteoarthritis in horses and antibiotics use in equine orthopaedic surgery. One of these presentations can be seen at our webpage www.pmvetservices.com under the “education” banner.



A horse sling at our hospital



Following a proposal and negotiations with the Horse Council of British Columbia and Fire Department, a horse sling to help with horse rescues and rehabilitation of hospitalized horses has been acquired.

Why a horse sling?

Several situations where the use of a sling would have greatly facilitated the work of the fire department and the management of certain cases at our hospital prompted discussions and negotiations for the common purpose of acquiring an Anderson Sling to help in these situations.



Horse being airlifted with an Anderson sling

What are examples of sling use in a hospital environment?

Most of the times a sling is an adjuvant to medical care of a hospitalized horse suffering from a neurological disease such as west nile virus or herpes virus or for post-operative fracture management. It is important to understand that some horses may not adapt to using the sling and a sling is not designed to support the full weight of the horse for extended periods of time. Rather it is a device where the horse can spare weight bearing during short periods of time. While complications can occur due to pressure sores, most horses seem to tolerate a period of slinging well. A horse in a sling needs to be carefully watched to avoid complications.

What is and Anderson Sling?

Anderson slings are state of the art devices that provide support to a horse's weight during situations where the horse cannot bear weight or stand up by himself. They are designed for emergency situations to lift or move

horses away from danger zones or to support horse's weight during hospitalizations.



This is an example of a horse on a sling following repair of a forearm fracture

COLIC: THE GOOD, THE BAD AND THE UGLY

Colic can transform a pleasurable day at the barn into something of a nightmare. If you have had horses for a period of time you probably know. The horse's gastrointestinal tract (GI) is a complex machine that requires the coordination of many elements and that is designed to extract energy and nutrients from relatively coarse feed. It does this by a lengthy process of fermentation aided by gastrointestinal bugs that require a careful balance. Our day-to-day management practices and our dependence on external food supply may alter this balance resulting in abnormal fermentation processes, or worse an imbalance in the bugs present in the guts. Resulting from an abnormal fermentation process, excessive gas can turn a normal process into a painful one. To complicate matters more, the anatomy

of a horse's intestines may facilitate their twisting and displacements when moved upwards by excessive gas accumulation. Sometimes it is matter of luck that the gut will not travel to undesired places or directions. When the bacteria population is affected, the end result may be an abnormal fermentation process or overgrowing of abnormal bacteria potentially resulting not only in colic but also in severe shock. Abrupt changes in feed, feeds with a very high carbohydrate content or highly fermentable content or some changes in the horse's routine, lack of water, dentition and parasites may all contribute to colic. Fortunately for your horse (and you!) most colics in horses will resolve with some medication, time and a bit of TLC. However some of them may turn into a real nightmare and potential life-ending event.



These are diagrams of the horse's intestines in an abnormal location. During nephrosplenic entrapment the bowel migrates to a position between the spleen and the kidney resulting in a partial obstruction due to kinking and colic. The image on the left represents the left flank of the horse (head to your left) and the image on the right is a perspective from the horse's rear. The spleen is the large blue organ in the image.



The Horse's Chef



Teeth Biscuits

Is your horse's mouth a bit tender from old age?

Try this recipe for treats. You can make them as soft as your furry friend likes them.

Ingredients:

- One cup molasses
- One jar (500 ml) applesauce
- One cup corn oil or more depending on desired final texture
- Six cups old fashioned oats
- Three cups whole wheat flour.

Mix all ingredients together. Add oats if dough is too wet. Roll into meatball sized balls. Dough will be sticky – keep hands wet. Place on ungreased cookie sheet. Bake in 300 F degree for 30 min. or until firm— up to one hour until firm. Cool down before storing. Refrigerate- these treats spoil quickly in warm weather. You can use sweet feed in place of oats or grated carrots or bran can be added, too to increase palatability.

HORSE BITS

COLIC: WHAT TO DO? By

Antonio M. Cruz DVM MVM, MSc, DrMedVet, DiplACVS, Dipl. ECVS

Important data

First it is important to ascertain that your horse suffers from colic. Typical signs would include looking at the flank, rolling, pawing, sweating, lying down and showing discomfort in general. Document how much your horse has pooped in the last 6 hrs. Remove your horse's feed and take his heart rate. If below 40 you have some time. If between 40 and 60 you may have some time. Take your horse for a walk and see if improvement occurs in 15-20 minutes. If not call your veterinarian. If heart rate is above 60 call your veterinarian right away. Make sure you document frequency and character of pain. If your horse wants to drink let him do so. Walk your horse but not excessively. Fifteen minutes at a time is appropriate or more if he is violently colicking. If he wants to lie down quietly, let him do so.

The Good

Fortunately about 70 % of colics are included here. Examples include mild impactions, gas and spasmodic colics. Typically heart rate is rarely above 50 and the horse displays mild colic. A veterinary examination should be completed to rule out early stages of something more serious. The examination will include an evaluation of the horse's cardiovascular system, a rectal palpation and examining the horse's stomach. More in depth exams may include an ultrasound evaluation and a belly tap, as well as examining blood samples. Usually these colics resolve with time and a bit of medication.

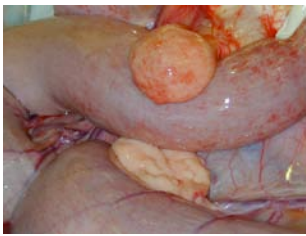


Image of a strangulating lipoma causing colic. Lipomas are the most common cause of small intestinal obstruction in older horses.

The Bad

These colics are more unusual and are characterized by a moderate to severe pain and usually an elevated heart rate above 60. They do not respond to pain medication and need to be hospitalized. Most of these cases will require surgery, although there are some other reasons why a horse may colic badly that do not require surgical intervention. These cases are better evaluated in a hospital setting as they may need advanced medical care.

This picture shows a piece of intestine dying as a result of a twist. This piece of bowel needed to be removed. The horse recovered well.

**The Ugly**

These are the ones when the horse deteriorates quickly. Rapid action and referral to our hospital is important to stabilize the horse and decide further course of action. These horses usually have heart rates above 60, are dehydrated and have severe pain. Delaying intervention in these cases may jeopardize the final outcome. If surgery is indicated, recent advances have allowed us to improve prognostic rates and if treated early, colic surgery can be greatly successful.

IRAP and horse's joints: What's the buzz?

By

Antonio M. Cruz DVM MVM, MSc, DrMedVet, DiplACVS, Dipl. ECVS

(Orthokine) is marketed by Arthrex VetSystems in the USA. The product was originally developed in Europe, and has been used extensively in Germany. IRAP (Interleukin-1 Receptor Antagonist Protein) is an anti-inflammatory protein that counteracts the destructive effects of inflammatory proteins such as Interleukin-1 (IL-1) within the inflamed joint.

Levels of IRAP and other anti-inflammatory proteins in the blood can be increased and produced for joint injection by incubating a 50ml sample of blood from your horse for 24 hours in a syringe produced by Arthrex VetSystems. The syringe contains glass beads coated with a substance to enhance production of anti-inflammatory proteins including IRAP. The syringe must reach the incubator as soon as possible after the blood has been harvested from your horse; though transport of the syringe for short periods of time in a water bath at 37°C has yielded satisfactory results. After 24 hours, the syringe is centrifuged, and the serum collected. The amount of serum collected from each 50ml syringe of blood is usually between 20-25ml. This yields 5-6 doses of IRAP, but the number of doses available for use from each collection is dependent on the specific joint.



Once the serum has been harvested, it is filtered and then frozen in single dose aliquots (small doses). We then submit a small sample of each batch of serum for microbial culture. Injections are kept frozen until immediately before use. Once thawed and immediately before they are used, each individual dose is again sterile filtered.

Indications for use of IRAP/Orthokine in the joint include horses with a well-defined synovitis/capsulitis, particularly those horses that do not respond well to conventional anti-inflammatory joint medication and horses that have had arthroscopic surgery and have been found to have focal cartilage diseases.

Orthokine is **NOT** recommended for use in tendon sheaths or bursae, in joints where there are bone fragments, fractures, meniscal or ligamentous injury unless it has been successfully treated arthroscopically, in bone cysts, or in horses with advanced osteoarthritis (low success rate).

In general 2-3 treatments of the joint are performed, at 8-14 day intervals. The volume injected at each treatment is 1-8ml, depending on the joint. First injection after surgery may be given at 7 days.

After injection, we routinely bandage the joint if possible for 2 days, and the horse should be kept on 3 days of strict stall rest, followed by 10 days of hand-walking (30-45 minutes). Once the course of injections and the final hand-walking period is completed, horses should receive one week of ridden walk exercise, followed by one week of ridden walk and trot, before returning gradually to regular training programs. The instructions above may vary, depending on the primary joint disease. As with any joint injection, the joint should be monitored carefully for any signs of infection (heat, swelling, increase in lameness) – if you notice any of these signs, please you should contact us immediately.

Adverse effects of this product have not been reported after extensive use in people and horses in Europe and North America, though if you have any concerns about your horse after injection you should contact our office.

DENTAL CARE

by David Paton BSc, DVM

Working in the mouth of an unsedated horse without the benefit of modern power tools would be like stepping back in time and having a human dentist work on your child with the cable driven drills of the 1950's! Horses remain athletically useful and live far longer than in the past. One of the prime reasons is that dental care has evolved from the check the teeth when the horse starts losing weight mentality to one of proactive preventative dental care.

Of major significance is the effect of oral pain on the horse. Horses being "flight" animals are not prone to exhibiting pain unless it is causing significant discomfort. Now we know that periodontal disease, an inflammatory condition of the gums and periodontal ligament surrounding the tooth, causes severe oral pain and leads to a wide variety of oral problems. These can include tooth root, bone and systemic infections; bone loss, sinus infections, loose teeth and abnormal dental wear. Dental equilibrium is a term referring to



A well sedated horse is more likely to cooperate during the oral exam so a proper job can be done to evaluate the entire oral cavity.

to the balance of the 4 dental arcades in the horse's mouth. If the mouth falls out of equilibrium abnormal wear begins to develop. Front and rear hooks, wave mouth, step teeth, wide diastemas (spaces between teeth), crooked teeth and

periodontal disease can develop. As these problems progress, hay and grass can start to pack between the teeth and poke into developing periodontal pockets. This is a very painful condition, which leads to the development of further dental disease. With advancing age all of these problems contribute to poor mastication, oral disease, poor performance and overall poor health.

As we become more knowledgeable we are very well equipped to help prevent dental disease. Of equal importance are the advancements in the diagnosis and treatment of dental problems. At the recent advanced dental seminar we learned new techniques on tooth restoration including tooth repair, root canal and treatment of periodontal disease.



X-ray of a horse's dental arcade showing all of the tooth roots

It is widely apparent that, more than ever,

routine dental care is important for the long term health and welfare of the horse. Radiology is becoming an important and accepted part of equine dentistry. As in human dentistry a wide variety of oral abnormalities can be diagnosed with oral x-rays. Expensive dental interventions can often be avoided through early detection of developing problems. For more information regarding your horse's dental health, please do not hesitate to call our office at 604 856 3351.



Proper instrumentation and position of the horse as well as its control are paramount to obtain a good dental exam.



Sometimes a diseased tooth, like the one shown in this picture can be removed through the mouth with adequate tools and expertise.