University of Mosul
Lecture No.:4
College of Veterinary Medicine
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Website:

Lecture title: lameness

Lecturer Affiliation: department of surgery and theriogenology

Summary:

Thrush

Its a degeneration of the frog with secondary anaerobic bacterial infection that begins in the central and collateral sulci. Itis characterized by the presence of a black necrotic material in the affected areas. The infection may penetrate the horny tissues and involve the sensitive structures.

Etiology:-

1-The predisposing causes of thrush are unhygienic conditions, dirty uncleaned feet.

2. Many organisms are probably involved, but spherophorous necrophorous appear to be the most important one.

Clinical sings:-

1-There is an increased amount of moisture and a black discharge in the sulci of the frog. This discharge which varies in the quantity has a very offensive odor.

2-When the affected sulci are cleaned, it will be found that they are deeper than normal and may extend into the sensitive tissues of the foot, causing the horse to flinch when they are cleaned.

3-In severe cases that have penetrated into the sensitive structures of the foot, the horse may be lame. Generally, the hind limbs are more frequently affected

Treatment:-

1-providing dry, clean flooring and thorough debridement of the frog and sulci. 2- The foot should be cleaned daily and the cleft of the frog packed with a proper medication such as equal parts of phenol and iodine, T. of iodine and 10% formalin.

3- Application of 2% Lugol's iodine.

4- Another treatment consists of packing the sulci with cotton soaked in 10-15% sodium sulphapyridine solution.

5- Degenerated frog tissue should be removed.

Prognosis:-

It is favorable if the disease diagnosed early, and it is guarded if the sensitive structures are involved.

Puncture wounds of the white line (Gravel)

It is happened as an opening in the white line that permits infection to invade the sensitive structures. Because there is no drainage, inflammation follows the line of least resistance and drainage occurs at the coronary band.

Etiology:-

1-A puncture wound or crack in the white line may occur in feet that are too dry.
2-Chronic laminitis with its associated seedy toe.

Clinical sings:-

1-Lameness will usually appear before drainage at the coronet band occurs.
2-Careful examination of the white line and sole will reveal black spots, which should be propped to there depth, where sensitive laminae will found.
3-After crack is propped pus will often exude from the wound.
4-When the condition has been present for sometime drainage at the coronary band will be noted.
5-Systemic reaction to the infection varies, but in most cases infection remain localized.

Diagnosis:-

1-Careful examination of the foot with hoof tester.
2-Most cases can be diagnosed before coronary band region breaks and drains.
3-Careful observation of the way the horse sets his foot on the ground, this will help in localization the region of penetration.

Treatment:-

1-Establishing proper drainage for the infection.
2-The foot may be soaked in Mag . sulphate salts.
3-Applying iodine to drainage area and bandaging the foot until healing.

Seedy toe

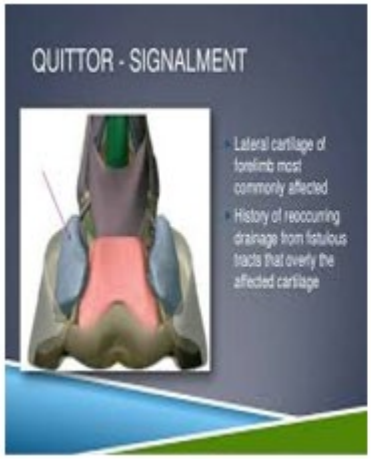
It is separation of the horse hoof wall from the underlying sensitive laminae at the white line resulting in a cavity that fills with crumbing dirt, horn and debris and is prone to associated infection. This condition is interfere with Gravel in the clinical sings, diagnosis and treatment.

Etiology:-

The condition is usually present in chronic laminitis.

Diagnosis:-
-physical examination
-Dorsopalmar radiographs to assess the extent of separation of the hoof wall
Treatment:-
1-Corrective trimming and removal of the entire extent of the separated hoof wall to the point that firm, healthy tissue can be seen.
2- Application of antiseptic or astringent. Topical treatment with tincture of iodine is commonly performed daily for at least a week.
3-Corrective shoeing
4-Nutrient supplement

Quittor (Necrosis of the collateral cartilage)
It is a chronic purulent inflammation of a collateral cartilage of the distal phalanx characterized by necrosis of the cartilage and sinus drainage at or above the coronary band. It is most common in fore limb.
Etiology:-
1-Injury near the coronary band over the region of the collateral cartilages that producing sub coronary abscess and finally quitter.
2-Penetrating wound through the sole, where infection is transmitted to the collateral cartilage.
3-Wire cuts or bruises that damage the cartilage and reduce circulation in the region.
Clinical sings:-
1-The condition may occur over either the medial or lateral collateral cartilage.
2- Swelling , heat and pain over the coronary band.
3-Chronic suppurative sinus tracts that tend to heal and then break open at intervals is characteristic sign of quitter
4- Lameness occurs in acute stages that may show remission when the lesion appear to be . healing.
5- Permanent damage and deformity of the foot may result causing persistent lameness.
Diagnosis:-
1-Depending on the clinical sings.
2-Using probe to differentiate it from shallow abscess.
3-Radiographs can be helpful to show the involvement of the middle and distal phalanx.



Treatment:-

Medical treatment such as injection of caustics e.g. silver nitrate 20% or using of enzymes but it appear of lest effect.

The treatment of choice is surgical excision of the necrotic cartilage. The surgical technique as follows:-

1-The region is clipped, the hoof is trimmed and rasped, scrubbed and placed in a povidone iodine soaked bandage for 24 hr.

2-Tourniquet is applied.

3-An elliptical or curved incision beginning just dorsal to the coronary band over the diseased collateral cartilage.

4-The flap is dissected distally to expose the collateral cartilage and a sterile probe is induced to identify the drainage tract.

5-Necrotic cartilage is recognized by its dark blue or reddish blue appearance.

6-All the necrotic tissue and cartilage is excised.

7-If necrotic cartilage extends below the coronary band a hole is drilled in the hoof wall over the ventral most limits of the necrotic cartilage to provide drainage

8-A polyethylene tube is placed in the wound and is sutured to the limb proximally.

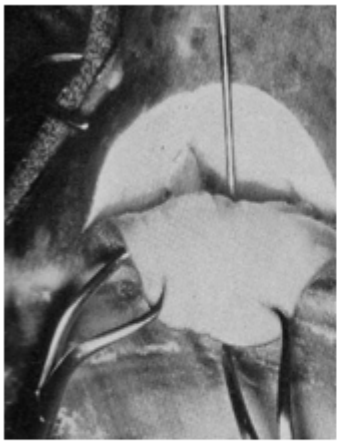
9-The remaining tract is then packed with an antiseptic soaked sponge, and leaving an opening at the top of skin flap.

10-The foot and sole can either be bandaged or placed in a protective boot.

One day following the operation the bandage is removed and the wound flushed with a 1% povidone iodine solution. This will repeated once daily until infection is gone.

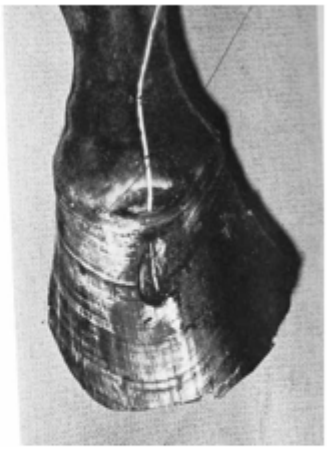
Prognosis:-

For acute and sub acute cases is good with the treatment described



A curved incision is made just proximal to the coronary band. A sterile probe was used to identify the tract.

After the tract has been debrided the skin is sutured leaving a small opening at the top. The tract is packed with gauze soaked in antiseptic solution.



A hole was made in the dorsal surface of the hoof wall to remove the involved tissue and provide good drainage.

Side Bone:-

An ossification of the collateral cartilages, are usually found in the fore feet and are most common in horses having poor conformation.

Etiology:-

1-Concussion of the quarters of the foot causing trauma to cartilages is probably the cause of most cases.

2-Hereditary predisposing factors through poor conformation e.g. horses that are base narrow are susceptible to develop lateral side bone, while horses that are base wide develop medial side bone.

3-Poor shoeing may cause increased concussion resulting in side bone. And using shoes with long heel calks.

Clinical sings:-

1-Lameness resulting from side bones is rare, usually being present only when cartilages are in the process of becoming ossified and when inflammation is present.

2-Massive bone formation may cause mechanical interference with foot action.

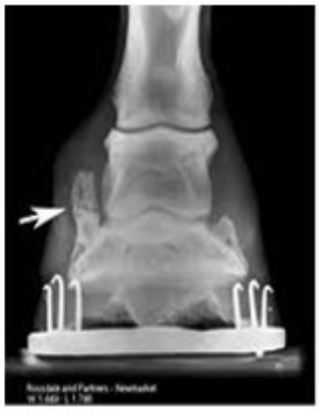
3-If side bones are a cause of lameness, there will be heat and pain over one or both of the cartilages.

4-Hardening of the cartilages can be palpated.

5-Pressure over the region will cause the horse to flinch if the cartilage in the active stage of bone formation.

6-In some cases there will be a visible bulging of the quarter at the coronary band.





Diagnosis:-
Radiological examination will reveal bone formation in the cartilage.
Palpation of the cartilage.
Treatment:-
1- 3-4 vertical grooves along the hornified layers (do not penetrate the sensitive laminae) at the quarters of the hoof wall below the coronary band are made, this will permit expansion of the foot and relieves the pain.
2-When fractured side bone cause acute lameness, only the small proximal chips can be removed, but the large pieces should not.
3-When chronic lameness is present a palmer (posterior) digital neurectomy can be done on the affected side.

Strain
Strain has been defined as damage to a tendon or muscle caused by overuse or stress. Strain of a tendon can range from minor inflammation to disruption of the tendon or avulsion of the tendon from its bony attachment.

Sprain
A sprain may be defined as the stretching or tearing of a supporting ligament of a joint by forced movement beyond its normal range. In its simplest form there is minimal disruption of fibers, swelling, pain, and dysfunction. Severe sprains may cause total rupture of ligaments, marked swelling, and hemorrhage and joint instability.

Sprains are classified as follows
A- Mild Sprain
This is a sprain in which a few fibers of the ligament have been torn with some hemorrhage into the ligament, but integrity is not lost. Rest and a support bandage are the appropriate treatment of this problem.

B- Moderate Sprain

A moderate sprain is one in which some portion of the ligament is torn and some degree of functional loss is sustained. The amount of damage may vary from a tear of a relatively small portion of the ligament to almost complete avulsion. Union can therefore proceed in an orderly manner as a result of healing with fibrosis. The use of a cast is indicated in the appropriate joint to support this healing.

C- Severe Sprain

In sever sprain there is complete loss of function of the ligament. The stress tears it completely away from one of its attachments or pulls it apart along its length. The loss of integrity of the ligament may result in luxation of the joint. Some form of surgical intervention is generally indicated with a severe sprain, but this depends on the ligament and the joint.

-Sprain Fracture

In this case, the portion of bone to which the ligament is attached becomes avulsed.