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Lecture title: lameness

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Summary:

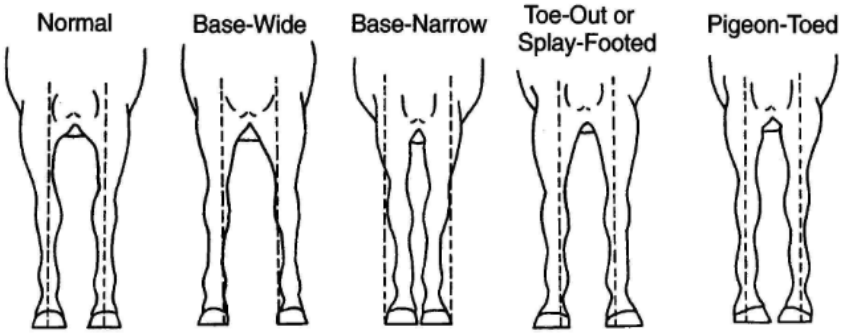
Faults in conformation of the fore limb

-Base narrow:- In base narrow conformation , the distance between the center lines of the feet at their placement on the ground is less than the distance between the center line of the limbs at their origin in the chest when viewed from the front. This is found most often in horses having large chest and well developed pectoral muscles, such as quarter horses.

-Base wide:- The distance between the center lines of the feet is wider the distance between the center lines of the limbs at the chest .

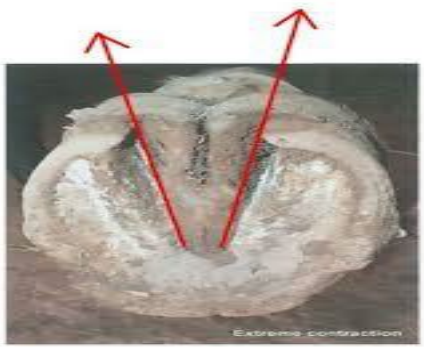
-Toe-in or pigeon –toed:- Toe-in is a position of the feet in which the toes point toward one another when viewed from the front. It is congenital and usually accompanied by a base-narrow and rarely with base-wide.

-Toe-out or splay footed:- When viewed from the front , the toes point a way from one another. The condition is usually a congenital and may be accompanied by either base-wide or base narrow conformation.



-Flat footed or dropped sole:- In this case, the sole of the hoof is more flat than concave. Making the walking is forcing on the sole of his foot as well as on the hoof wall and frog. ... In MOST cases, flat feet are the result of hereditary or even bad managements. it could be treated by proper hoof maintaining or support shoes.

-Contracted heels occurs when a ratio of the frog length to frog width. When the frog width is less than two-thirds the frog length leading the heels much closer together and the frog will be atrophied. This fault reduces the ability of the shock absorbing by frog & digital cushion. Contracted heels can occur in front or hind feet and may affect a single foot or a pair due to hereditary or poor Trimming and shoeing.It could be treated through using special kind of shoes



Affection of hoof

Hoof wall cracks

These are cracks in the wall of the hoof, starting at the bearing surface of the wall and extending to a variable distance up the hoof wall, or cracks originating at the coronary band, as a result of a defect in the band and extending downward. These cracks can located on the toe (toe crack) or on the quarter (quarter crack), or on the heel (heel crack), and may occur in either the front or hind feet. Quarter cracks and heel cracks are usually the most severe because they often involve the sensitive laminae.

Etiology:-

1-Selenium or copper deficiency

2- An infection that develops near the structure of the foot can cause cracks to develop in the hoof injury

3-Excessive growth of the hoof wall.

4-Injury to the coronary band producing a weak and deformed hoof wall, will lead to cracks originating at the coronary band.

5-Weakening of the hoof wall due to excessive drying or excessively thin walls also causes hoof cracks.

6-Poor foot conformation

7-Poor shoeing and poorly placed nails

Types of cracks:

1-Toe crack - This is typically caused when a horse is landing toe first due to heel pain or by overloading the toe during movement

2-Quarter crack - These are cracks that extend through the entire thickness of the hoof, usually appearing at the coronary band and growing towards the ground

3-Heel crack - This is a crack in the heel area, usually caused by horseshoes that are either too

long or too short
4-Bar crack - Cracks in the bar of the hoof can be very painful and usually caused by trauma to the bottom of the foot

5-Grass crack - This is a thin superficial crack that starts from the ground and moves upward; these can be caused by going from a wet to dry environment and from nutritional deficiencies
6-Sand crack - Sand cracks are thin superficial cracks that start at the coronary band and move downward; they are generally caused by environmental and nutritional factors

Different types of cracks

Clinical sings:-
1-Lameness may not be present, but it will become evident if the crack extends into the sensitive tissues allowing infection to gain access to these structures.
2-An exudates under the cracks or suppurative inflammation of the laminae may be present depending upon the size of the opening into the sensitive tissues.
3- Traumatic lesions found above the coronary band when the crack is due to injury of the coronary band.

Diagnosis:-
1-Presence of the crack or cracks, which is easily identified and is classified according to its location
2-Hoof tester can be used to identify if there is a pain associated with the crack in the hoof wall.
3-Bleeding from the hoof wall crack after exercise indicates that the crack has extended down to the sensitive laminae.
4-Pus will exude from the infected hoof when pressure is applied.

Treatment:
1-Any infections or abscesses that might be present need to be addressed. This may require the use of antifungal or antibiotic medications and the debridement and drainage of any abscesses.
2-There are many methods for repairing the crack itself. The most common methods include:
-Application of compressive material to the surface of the sole
-Applying bar shoes

-Hoof rasp across the top of the crack
-Removing part of the hoof wall to reduce pressure or remove the crack
- Stabilizing the crack with clamps, sutures, screws, or wires
-Any wall cracks can be treated by use of special materials to fill the crack like Epoxy glues, Fiber glass or special hoof- repair material



Corns and Bruised sole

A corn is an involvement of the sensitive and insensitive tissues of the sole at the angle formed by the bar. Corns occur most frequently on the inner angle of the front feet are rarely found in the hind feet. This is due to the fact that the front feet beer more weight than the hind feet.

Etiology:-

1-Corns are usually due to improper shoeing.
2-When shoes are left on the feet too long , the heels of the shoe are forced inside the wall and cause pressure on the sole at the angle of the wall and bar.
3-Improper trimming of the feet making the heels too low , increases pressure at the angle of the wall.
4-A long, weak fetlock and a narrow foot may cause corns to appear at the bars, while in a wide foot corns are more likely to occur in the sole.
5-Trauma to the sole from rocks and other objects.
6-Horses have been affected previously with laminitis are more susceptible to this disease

types of corn lesions may be evident:-

1-Dry corn:- In this case hemorrhage within the inner surface of the horn resulting from bruising of sensitive tissue usually causes red stains.
2-Moist corn:- This is caused by severe injury that results in serum accumulation beneath injured horn.
3-Suppurating corn:- The corn becomes infected resulting in necrosis of the sensitive laminae
-Pathologic changes due to bruised sole are similar to those caused by corns but occur in toe or quarter regions of the sole rather than at the angle of the wall or bar. Bruised sole also may be of dry, moist or suppurating type.



Clinical sings:-

1-The horse will show varying degrees of lameness depending upon the severity of the bruise or corn, while the attitude of the lameness will vary according to the location of the bruise or corn.
2-Hoof tester will reveal the location of the pathologic changes.
3-A cleaning of the sole from the bottom of the foot with a hoof knife will reveal red stains in the sole indicating a bruised region.
4-In some cases this region may show a bluish discoloration, especially if a sole abscess is developing.

5-If the corn is present at the inside heel, the horse will tend to place more weight on the outside of the foot because of the pain.
6-In some cases, the horse will tend to bear most of the weight on the toe and will rest the foot with the knee forward to decrease heel pressure.
7-Shortened stride

Treatment:-

1-In cases in which shoeing is the cause, removal of the shoe may be all that is necessary.
2-To prevent shoes from causing corns the heels of the shoe should always extend well back and should fit full on the wall at the quarters and heels.
3-Removal of some of the tissue over the corn helps relieve pressure, but sensitive tissue should not be exposed.
4-The horse should be rested and should not reshod until symptoms disappear.

5-In case of suppurating corn the sole over the region should be removed until drainage of the sensitive tissues is established.
6-The foot should be soaked daily in an antiseptic or in solution of mag. Sulph. , after which T. of iodine is applied.
7-The foot should be bandaged and protected from contamination.

Prognosis:-
Is always guarded, since some cases tend to become chronic which finally cause osteitis of the distal phalanx.

Canker (equine proliferative pododermatitis)
It is an infectious process that causes a chronic hypertrophy(enlargment or increase) of the horn producing tissues of the hoof.The disease generally origenated in the frog but it left untreated ,it can spread to the adjacent sole,bars and heel wall . It may involve any one or all of the feet .It is most often found in the hind feet, and it is a rare condition.

Etiology:-
The chief etiologic agent is related to unhygienic stabling, so it develops in horses that stand in mud or in bedding that is soaked with urine and feces. It also appear in horses whose feet do not receive regular attention. The specific cause is thought to be an infectious process agent but it is unknown. Infectious agents such as bacteria, viruses, fungi, and spirochetes have all been suggested.

Clinical sings:-
1- Lameness usually is not present in early stages of the disease and may not be detected until well advanced.
2-The foot usually has a fetid odor and the horn tissue of the frog looses easily and when removed, reveals a foul smelling, swollen corium covered with a caseous white exudates.
3-The disease may extend to the sole or even to the wall of the foot.


Diagnosis:-
It can be made by the appearance of the foot and by the offensive odor. Cheese masses with cauliflower like growth.

Treatment:-
1- All loose horn and affected tissues should be removed (debridement) and an antiseptic, astringent dressing applied like 5% of picric acid should be applied under bandage.
2- Caustic agent, such as a mixture of copper sulphate and zinc sulphate crystals are sometimes

used.

3- Canker sometimes treated successfully with penicilline used at a rate of 3 million units per day until improvement was shown.

4- Administration anti-inflammatory drugs such as prednisolone.

Prognosis:- It is guarded to unfavorable