

Nail Bind & Nail Prick

INTRODUCTION

- Accurate placement, by the farrier, of each nail through the insensitive epidermal laminae of the hoof is essential
- Nails must penetrate deeply enough to hold the shoe firmly, but without penetrating the sensitive laminae of the hoof
- If the nail does penetrate the sensitive laminae, pain, infection and lameness can result

Nail 'bind'

- is the term used when the nail has been driven too close to the sensitive laminae.

Nail 'prick'

- is used when the nail has been driven through the sensitive laminae.

Nail Bind & Nail Prick

CAUSE

- Nail bind and nail prick are caused by the direct penetration of a nail through the sensitive laminae of the hoof, or close enough to impinge upon the laminae.

DIAGNOSIS: CLINICAL EXAMINATION

- Horse becomes lame, often not immediately, but usually the next day or within the first week after shoeing
- Increased digital pulse
- Pain on percussion of the hoof, or application of hoof testers, directly over the head of the nail

Nail Bind & Nail Prick

TREATMENT

- The shoe should be removed, any pus drained, and the nail hole flushed with antiseptic solution
- Politic (*antibiotic ointment + MgSo4*) and hoof bandage should be applied
- Tetanus antitoxin injection given for prophylactic issue.
- In severe cases, infection may track under the sole, or even track up to and burst out from the coronary band, in which case local resection of the necrotic sole and/or hoof wall, and a course of antibiotic treatment may be necessary

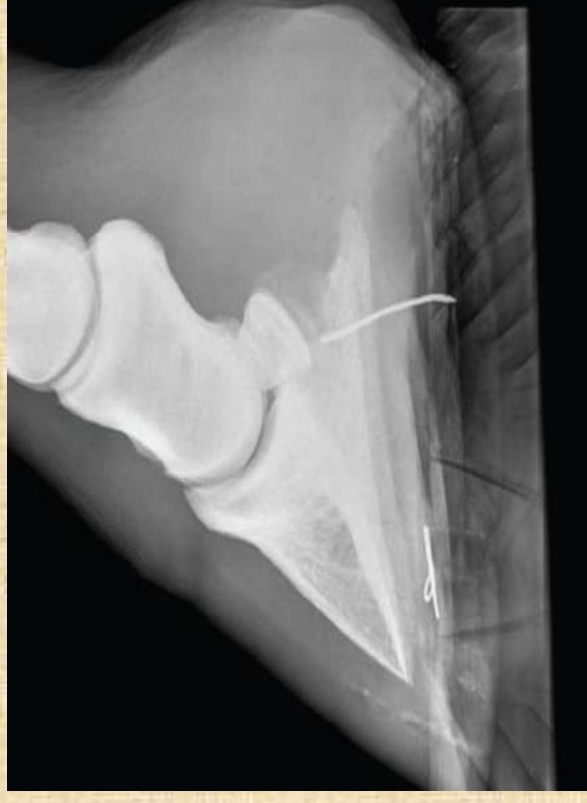
AFTER-CARE

- Once the horse is sound, with no discharge from the nail hole, careful re-shoeing may be recommended

Penetrating foot wounds

INTRODUCTION

- Any penetrating injury to the horse foot is potentially serious
- Can cause physical damage to the important anatomical structures within the hoof and, more seriously, may introduce infection
- Identifying the site of injury, the direction of injury, and the depth of penetration *enables the veterinarian to establish which structures of the hoof may be damaged and potentially infected*



Penetrating foot wounds

INTRODUCTION

- **Site of Injury**
 - To explain the correlation between the site of injury and the seriousness of the injury, the hoof is divided into 3 regions: dorsal third, mid third and palmar third
 - Deep penetration into the dorsal third of the hoof may involve the pedal bone
 - Penetration into the mid third of the hoof is potentially the most serious as it can involve the navicular bone, navicular bursa, deep digital flexor tendon and the distal interphalangeal (DIP, coffin) joint
 - Penetration into the palmar third of the hoof is most likely to involve the digital cushion

Penetrating foot wounds

CAUSE

- Penetrating injuries to the horse foot are most commonly caused by
 - nails,
 - screws and
 - pieces of wire.

Penetrating foot wounds

DIAGNOSIS: CLINICAL EXAMINATION

- In all cases, lameness is the clinical sign which alerts an owner to a penetrating injury.
- Where synovial structure penetration has occurred the following may be noted:
 - *Straw-coloured, yellowish synovial fluid discharging* through the tract or hole
 - *Very severe lameness* with a sudden onset (up to 12 hours after the injury), sometimes to the point where the horse will not bear weight on the injured foot

Penetrating foot wounds

DIAGNOSIS: RADIOGRAPHY

- If the penetrating object remains in the foot, the temptation to immediately withdraw it should be resisted (during radiographic examination it helps identify affected hoof structures).
- If the penetrating object is no longer present in the foot:
 - A sterile probe is carefully inserted into hole or tract and a radiograph is taken to determine the direction and depth of the injury
 - Injury is filled with radio-opaque dye and a radiograph is taken to determine the extent of injury

Penetrating foot wounds

DIAGNOSIS: SYNOVIAL PENETRATION

- The most serious penetrating injuries are those which enter synovial structures such as the navicular bursa or DIP joint
- Infection within these closed cavities is extremely difficult to treat, often leading to a fatal outcome

Penetrating foot wounds

TREATMENT

- Non-synovial Penetrating Injuries
 - ❑ Tract or cavity is opened with a hoof knife to establish good drainage and then flushed with hydrogen peroxide and/or antibiotic solution or spray
 - ❑ Antiseptics and astringents (i.e. dilute povidone iodine) or antibiotic wound spray should be applied to the wound daily
 - ❑ May need to be treated with antibiotics, active against both aerobic and anaerobic bacterial infections

Penetrating foot wounds

TREATMENT

- Synovial Penetrating Injuries
 - Require treatment similar to that described for non-synovial injuries
 - In addition, synovial injuries require repeated lavage (**flushing with large volumes of sterile saline solution**) of the affected joint and/or bursa to remove inflammatory chemicals and to reduce the numbers of infecting bacteria.

Penetrating foot wounds

AFTER-CARE

- Antiseptics and astringents (i.e. dilute povidone iodine) or antibiotic wound spray should be applied to the wound daily
- Tetanus antitoxin injection given if necessary
- Horse should be kept in a clean, dry environment

Penetrating foot wounds

CAUTION

- Prognosis for synovial penetrating injuries is always guarded
- Even the smallest penetrating foot injury may be very serious, introducing infection deep within the foot, so always treat such injuries as potentially serious until proven otherwise
- If the degree of lameness seems to exceed the severity of the visible injury, synovial penetration should be suspected and immediate investigation is justified

Corns

INTRODUCTION

- Important cause of lameness in shod horses
- A corn is a specific bruise of the sole, found in the 'seat of corn (angle between the hoof wall and bars)
- Caused by an injury which results in hemorrhage into the sensitive tissues of the sole, increasing pressure and causing pain and discoloration
- Most commonly affects the medial side of the front feet and may be either acute or chronic
- Three types of corns
 1. dry corns,
 2. moist corns,
 3. suppurating corns

