

ID: #503 - Daisy

Signalment: 3 year old Holstein cow

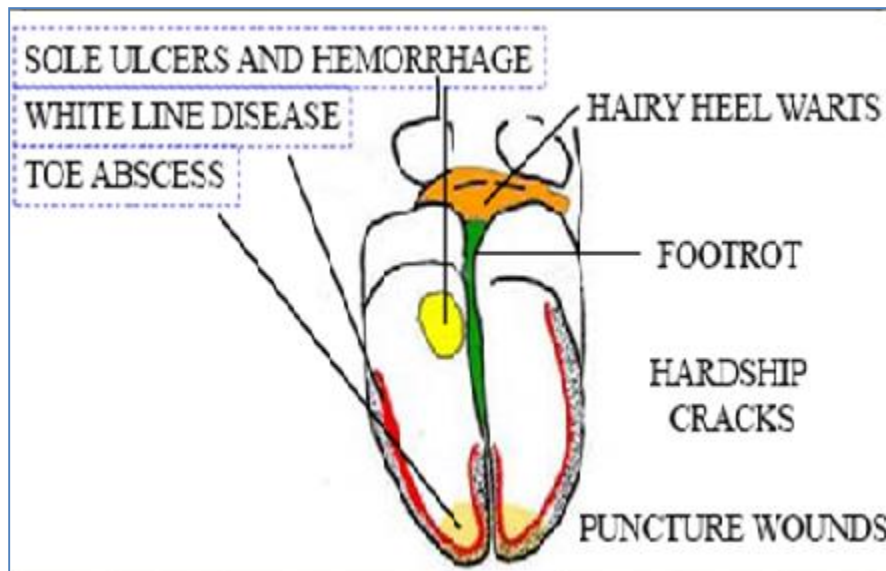
History: Daisy who normally has the highest milk production in the farm, her milk yield started to decrease about 1 week ago and she was lame on her right forelimb.

Clinical signs:

- Asymmetrical swelling of right forefoot and forelimb
- Severe lameness
- Sole ulcer
- Weight loss
- Decreased milk production

Differential diagnosis:

- Chronic septic arthritis of the distal interphalangeal joint infection
- Acute septic arthritis of the distal interphalangeal joint infection
- Proximal interphalangeal joint infection
- Pedal osteomyelitis
- Laminitis
- Toe abscesses
- Toe and/or sole ulcers
- Footrot (infectious pododermatitis)
- Hairy heel warts



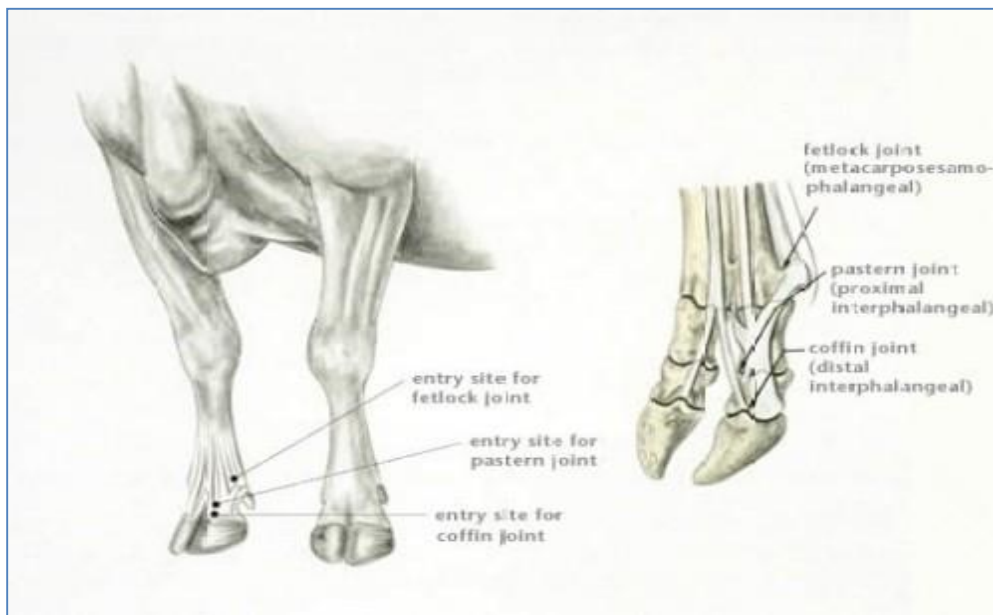
## Diagnostics:

- Clinical signs: swelling above the coronary band on the abaxial aspect of the hoof wall extending around to the bulb of the heel



Holstein adult cow suffering of a chronic infected sole ulcer. The coronary band and the heel are swollen.

- Injection of sterile saline into the distal interphalangeal joint results in discharge via the sole ulcer if present.
- Arthrocentesis – synovial fluid is cultured, common bacteria include: *Acrabacterium pyogenes*, *E. coli*, *Staphylococcus* and *Streptococcus spp.*, *Fusobacterium necrophorum* and *Bacteroides melaninogenicus*.



- Radiography – view of DIP joint with chronic septic arthritis show an increased joint space because of subchondral bone lysis.



Radiographic image of a distal right foot. This dorsoplantar view shows swelling of the lateral digit (*white arrow*) and subchondral bone lysis of the distal interphalangeal joint.

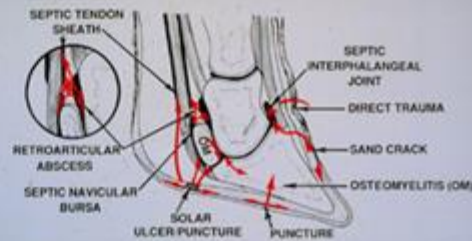
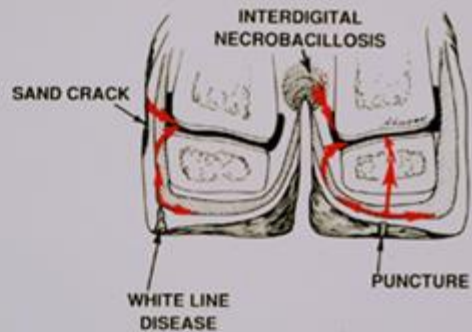
- Ultrasonography – compared with the partner sound claw the dorsal pouch of the infected DIP was larger.

Diagnosis: Distal interphalangeal joint infection

Aetiology:

- Dorsal commissure of the interdigital space via penetrating trauma or complicated footrot
- Sandcracks
- White line disease or retroarticular abscess

# Septic Arthritis



Michael D

37

Prognosis: Guarded to poor

Treatment: Digital amputation

Other treatments:

- Antibiotic treatment therapy which is usually not effective
- Surgical arthrodesis of the distal interphalangeal joint – recommended for show animals. It involves removing necrotic tissue and getting the affected bones to fuse

References:

<http://igrow.org/livestock/beef/lameness-in-cattle-causes-associated-with-infections/>

[http://www.merckmanuals.com/vet/musculoskeletal\\_system/lameness\\_in\\_cattle/disorders\\_of\\_the\\_bones\\_and\\_joints\\_in\\_cattle.html](http://www.merckmanuals.com/vet/musculoskeletal_system/lameness_in_cattle/disorders_of_the_bones_and_joints_in_cattle.html)