Remarkable Vets

Lameness/Laminitis Seminar 2014



Equine Laminitis

Causes - Treatment - Prevention

The Equine Team At Remarkable Vets

Dr Geoff Woodhouse BVSc (dist) Cert VA Dr Rachel Haylock BVSc MACVS Fiona Watherston C.o.S Jackie Clarke VN

```
Introducing.....
```

Trevor Sutherland
former Pharmacist et al
Current farrier - 20 years

10 Key Points

10 Key Points



10 Key PointsAnatomy of foot

10 Key Points

Anatomy of foot
Changes that occur in laminitis (pathology) and why

10 Key Points

Anatomy of foot Changes that occur in laminitis (pathology) and why Causes Presentation Treatment Prevention

Anatomy 201



90% of lamenesses are below the knee

90% of these are in the foot

Anatomy 101











• Laminitis is caused by failure of the attachment of the distal phalanx to the lamellae on the

inside of the hoof.



What Actually Occurs in Laminitis??

Think of how a nail grows

What Actually Occurs in Laminitis??

Think of how a nail grows Grows in length but stays attached. How??

What Actually Occurs in Laminitis??

Think of how a nail grows Grows in length but stays attached. How?? It's all about UNCONTROLLED MMP!!

In laminitis there is deregulation of a very orderly hoof process Too much MMP switched on Not enough MMP switched off

WHY??

We do NOT know the chemical(s) or pathways responsible for turning on Xs MMP enzyme

We do NOT know the chemical(s) or pathways responsible for turning on Xs MMP enzyme We DO know the factors and situations responsible for producing such chemicals

Laminitis is a sequel to an event remote from the foot. Usually gastrointestinal

The Causes of LAMINITIS

- Xs pasture containing WSC's Fructans
 Grain Overload (Xs starch) barley, wheat, corn (5-8kg / 450kg).....Oats are relatively safe
- Anything causing endotoxaemia colitis, metritis (RFM), pneumonia
 Hormonal effects - EMD, ECD

Causes of Laminitis (cont...)

GeneticsBodyshape

Fructans = plant energy

 Produced by photosynthesis(need light)
 Used by respiration - growth. Needs warmth and moisture

Accumulation happens with high sunshine and low growth Stored in the stem

Fructans = plant energy

High production plant species (ryegrasses)

Fructans

High production plant species (ryegrasses)
Certain times of year - good sunlight, cooler soil = spring and autumn

Fructans

- High production plant species (ryegrasses)
- Certain times of year good sunlight, cooler soil temps = spring and autumn
 Certain times of day - cooler mornings lead to high levels in afternoon

Fructans Risk is related to: **I.** Accumulation in the plant 2. AMOUNT eaten 3. Genetic Predisposition

Why do Fructans cause a **Problem**??

cause bacterial overgrowth
 Streptococcal species produce Lactic acid and 'something' that switches on MMP

Hormonal Causes

Equine Metabolic Syndrome

Hormonal Causes Equine Metabolic Syndrome

resistance to insulin
similar to Type II diabetes in humans but NOT the same
Horse insulin production has no limits
Insulin causes the disease



Symptoms

There is a classic appearance

Symptoms There is a classic appearance

Obel Grades I-IV





Watch for:

Gait and stance changes
 Hot feet
 Digital pulses

Usually bilateral or all 4 feet

- Laminitis beyond Grade I can be mistaken for other disease
- sweating
- elevated heart rate

colic
tying-up
pneumonia
etc etc

When laminitis strikes do not close your eyes and pretend it's not happening.

Irreversible changes can start from Day 1



Treatment (Management)

Treatment (Management) Consider underlying causes

Treat aggressively if possible

Treatment (Management)

- Take horse to a comfortable placeConfine
- Manage pain (drugs)

Drugs do not (currently) cure or limit the course of the disease

BB-97

Treatment (Management)

- Take horse to a comfortable placeConfine
- Manage pain (drugs)
- Feed appropriately
- Consider X-rays HDPD



Treatment (Management)

- Take horse to a comfortable placeConfine
- Manage pain (drugs)
- Feed appropriately
- Consider X-rays HDPD
- Support the pedal bone farrier styrofoam pads/silicon pads/Heart Bar shoes

Heart Bar Shoe



There is no quick fix (sorry !!)



Prevention of further damage and allowing healing is the aim

Key Point #9 48 hrs of no symptoms after all treatments cease PLUS no radiographic change cautious return to normality

Prevention

- Feeding
- aim for safe grass types
- do not overfeed
- manage timing morning grazing
- soak hay
 - grazing muzzles

Prevention by Intervention

Baseline x-rays - know your foot and protect it by minimising stress • Virginiamicin (Founderguard) Equine Metabolic Syndrome - diagnose it • Metformin?? Manage weight Exercise

Prevention - Supplements?? What do they do and do they work??

Prevention - Supplements?? What do they do and do they work??

Summary

Control weight
Exercise regularly - 20+ minutes
Know your feet (!) (baseline x-ray?)
Use your farrier
Act quickly

Advice of the Year - HumansEat food

- Mainly vegetables
- Not too much.....

Key Point #10 Eat grass Mainly leaf Not too much



