



... **DARE**
TO GO
BARE ...

CASE STUDY 2 – CANKER

CANKER IS A FAIRLY RARE, DIFFICULT TO SOLVE CONDITION USUALLY ORIGINATING IN THE FROG, WHICH CAN ALSO SPREAD INTO OTHER AREAS OF HOOF HORN. THE CAUSE IS NOT COMPLETELY UNDERSTOOD, BUT USUALLY ATTRIBUTED TO AN AUTO-IMMUNE RESPONSE, AND AGGRESSIVE ANAEROBIC BACTERIAL AND FUNGAL INFECTION IT DISPLAYS AS A PROLIFERATION OF VERY SOFT, ABNORMAL GRANULATION-LIKE FROG MATERIAL, WHICH EASILY BLEEDS, AND HAS A PUTRID ODOUR AND APPEARANCE

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**EQUINE
PODIATRY**
Association
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CASE HISTORY

'Gus' a 13 year old Thoroughbred arrived at my yard in June 2021, suffering from Canker in all four feet. This had been worsening over the previous 12 months or so since first diagnosed, and was affecting his soundness and usability.

Traditional treatment usually involves aggressive surgical debridement of all affected tissue, done under anaesthetic or heavy standing sedation, and topical applications of antimicrobial drugs, whilst keeping the feet dressed and scrupulously clean, in dry environment. The hope is that the tissue will then grow back normally, but the prognosis is generally guarded, and it is not unusual for the canker to return.

Gus's owner did not want to put him through this treatment unless there was no alternative..... The vet involved was very supportive of trying a different approach and acknowledged that as no-one really had the answers to this condition, an alternative was worth trying....



BACKGROUND INFORMATION:

- OWNED FOR THE PREVIOUS 9 YEARS BY THE SAME OWNER
- KEPT THROUGHOUT AT THE SAME YARD
- NO OTHER HORSES AT THE YARD WERE AFFECTED
- TRADITIONAL MANAGEMENT WITH NO TURNOUT IN THE WINTER, AND OFTEN IN DURING DAYTIMES IN THE SUMMER
- SHAVINGS/RUBBER CLEAN STABLE ENVIRONMENT
- FED GENERAL ALL-PURPOSE HORSE AND PONY NUTS AS HARD FEED
- HAY NOT AVAILABLE AD-LIB
- ALWAYS SHOD
- FROGS OFTEN BLED WHEN TRIMMED
- RECENTLY OFTEN UNCOMFORTABLE HAVING HIS FEET PICKED OUT
- HE WOULD OFTEN BE SORE ON THE ARENA SURFACE AS IT IRRITATED HIS FROGS, BUT GENERALLY COPEL WELL ON THE ROADS

I FIRST ASSESSED GUS AT HIS USUAL HOME, AS THE INITIAL PLAN WAS TO MANAGE AND TREAT HIM THERE...

- THE CANKER WAS UNDOUBTEDLY THE MOST SERIOUS OF THE HOOF PATHOLOGIES, AND HIS FROGS WERE VERY SORE TO TOUCH
- HIS HEELS WERE ALSO SHEARED WHERE THE CANKER HAD INVADED HIS FROG SULCUS'S
- HIS FEET WERE CONTRACTED, WITH UNDERUN HEELS AND NEGATIVE PALMAR AND PLANTAR ANGLES
- THE HIND FEET WERE ALSO BULLNOSING
- HE WAS LANDING INCORRECTLY FLAT ON HIS FRONT FEET, AND INCORRECTLY TOE FIRST ON HIS HIND FEET

ON FURTHER DISCUSSION AS TO WHAT WOULD BE INVOLVED HIS OWNER DECIDED TO BRING HIM TO MY YARD SO TREATMENT AND MANAGEMENT COULD BE TRULY OPTIMAL, AND THEREFORE INCREASE THE CHANCES OF A SUCESSFUL OUTCOME

The vet was fully consulted about the planned approach, and supported us throughout. I had never been involved in treating canker before, so it was vital to have this endorsement. He also visited within a few days of Gus arriving at the yard, to discuss and help with the trimming approach for Gus's frogs. I feel very fortunate to have this level of support for my work.

FOR THE PURPOSES OF THIS CASE STUDY, I HAVE FOCUSSED MAINLY ON THE CANKER TREATMENT HOWEVER THE SLIDES SHOW ALL OF THE PATHOLOGIES HE ARRIVED WITH AND HOW THOSE ALSO IMPROVED AND /OR RESOLVED I HAVE SHOWN THE LEFT FORE AND LEFT HIND. THE RIGHT FEET WERE THE SAME.

CANKER - RESEARCH AND PREPARATION

- I researched the different treatments most commonly used for Canker. There was quite a selection, all focusing on treating the infection: The more usual Metronidazole and Benzyl Peroxide Solution favoured by most vets, topical Linco-Spectin antibiotic powder, drugs used in chemotherapy, Verruca and Wart freezing applications, Acne cream, soaks in Potassium Permanganate, and Copper Sulphate with Aqueous Cream!
- All of these seemed to require fairly aggressive debridement of the frog, and meticulous cleanliness and dressings throughout, which wasn't ideal. None of them carried much more than the possibility of a successful outcome.
- Gus's owner had found the only product to make even a small improvement to his frogs was 'Artimud' which is an antibacterial and antifungal natural clay based product made by 'Red Horse' whose products are tried, tested and loved by the barefoot world – I had already thought these products would at least play a part in the treatment plan - so this was good to hear.
- ***Whilst talking to a friend about this case, Bee Propolis came up as potentially useful. It is a resinous natural substance produced by bees who collect and make it from a variety of plants. More research revealed it has strong antioxidant, antibacterial, antiviral and antifungal properties, and has all sorts of applications for disease and infection. It is also an immunity boosting aid, stimulating the formation of antibodies, and phagocytosis, which is the process where white blood cells attack and destroy unhealthy bacteria. It promotes wound healing and seems to have a strong affinity to helping skin disorders. It can be taken as a supplement and used topically. Needless to say, Propolis went to the top of my list of potential treatments.***
- As well as topically addressing the Canker, I felt I should slowly address Gus's immune system. However care must be taken doing this when auto-immune conditions are involved, as done too quickly you can create the opposite effect and actually escalate the problem instead.
- Gus's previous diet and management suggested he could be deficient in Vitamins C and E which are both important for a strong immune system.
- For the same reason his gut was likely not functioning as well as it should – good gut health is vital for just about everything, including a strong immune system - so I wanted to address this.
- I thought adding a supplement to sweep up and safely remove any associated toxins from his gut, preventing them getting into his bloodstream, was a sensible precaution throughout.

IT LOOKED LIKE A PLAN WAS COMING TOGETHER...

WHAT I DID - CANKER SPECIFIC TREATMENT

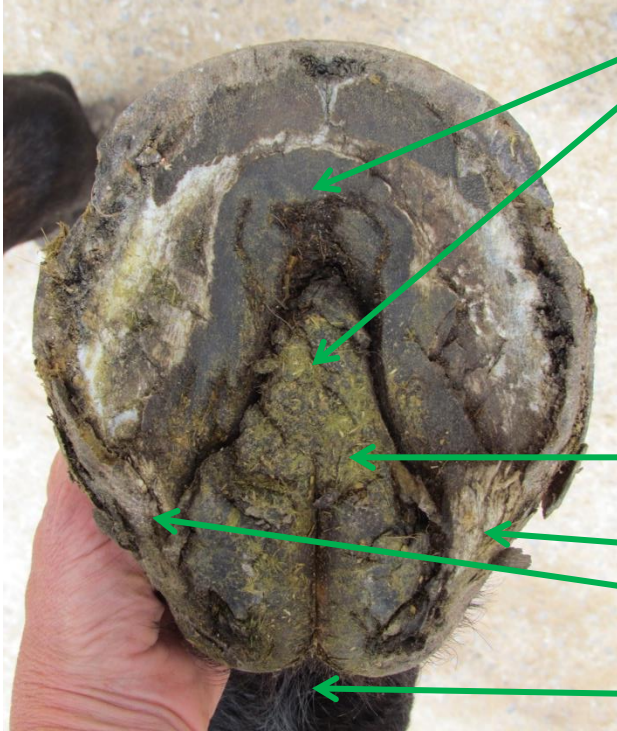
- *Gradually* removed the decaying area's of the worst mushy white frog material, trying to avoid bleeding as much as possible – this was done a few times a week to start with and was a sore process for Gus, so it was done as his tolerance allowed. It's also actually really difficult to trim this tissue because of it's consistency!
- An initial Cleantrax soak to all four feet - Cleantrax is a antibacterial and antifungal hoof cleanser safe to use on live tissue, and another tried and tested barefoot favourite. Soaks were intermittently repeated as a precaution.
- Cleaned his frog sulcus's as necessary – initially this was daily, but eventually lessened over time. I used baby wipes to avoid too much moisture
- Dripped Propolis Liquid into his frog sulcus's and up into the shearing at his heels. I painted it onto his frog and down into his collateral grooves. This was all done daily.
- After applying the Propolis, I put 'Sole Paint' also a 'Red Horse Product' into the same areas, again done daily. This is similar, but much more liquid, than the 'Artimud' and I thought it would better seep into all areas.
- He wore his hoofboots and pads 24/7, with just a couple of hours break a day whilst in a stable.
- I slowly added vitamins C and E to his diet, along with a Propolis supplement in capsule form.
- I slowly added a gut support product, and Mycosorb toxin binder to his diet
- I fed him a sensible, balanced, barefoot friendly diet, with ad lib hay and appropriate grazing.
- The approach chosen to treat the Canker meant he was able to be turned out 24/7 using a mixture of our surface track and large grazing areas – essential for his mind as well as his body and feet.

AND THE MORE GENERAL MANAGEMENT

- I asked a farrier to remove his shoes on arrival rather than doing it myself as Gus was so uncomfortable about having his feet handled, I wanted this to be done really fast and efficiently. I was worried if he objected I may not be able to cope as well. This proved a sensible decision and was accomplished with little stress.
- I immediately fitted boots and pads on all four feet for protection and comfort – I was genuinely worried that these feet were so poorly he almost may not be able to move without this protection initially.
- I trimmed his feet to encourage correct function and balance – the great thing about him being on site was I could trim 'little and often' meaning everything stayed optimal, helping to speed up the improvements.
- The boots and pads also provided appropriate stimulation, and so returned correct function to all of the structures in his feet, meaning they were finally able to recover the previous degeneration and gain strength
- He was seen regularly by a chartered physiotherapist, and put on a rehab program of stretches and exercises to help his body, which had been compensating for the discomfort in his feet.

FRONT FEET

LF ON ARRIVAL 11/06/21 - PRE TRIM



ABNORMAL FROG MATERIAL, SOLE AROUND FROG IS ALSO SHOWING SIGNS OF CANKER

DEEP SULCUS AND SHEARED HEELS – EXTENDING UP INTO HEEL BULBS AND DIGITAL CUSHION

NARROW FROG

VERY LITTLE HEEL SURFACE AREA
NO BAR

CONTRACTED HEELS



UPRIGHT LATERAL CARTILAGES

THIN AND WEAK DIGITAL CUSHION



PROBABLE NEGATIVE OR FLAT PALMAR ANGLE

LONG TOE & WHOLE FOOT MIGRATING FORWARDS

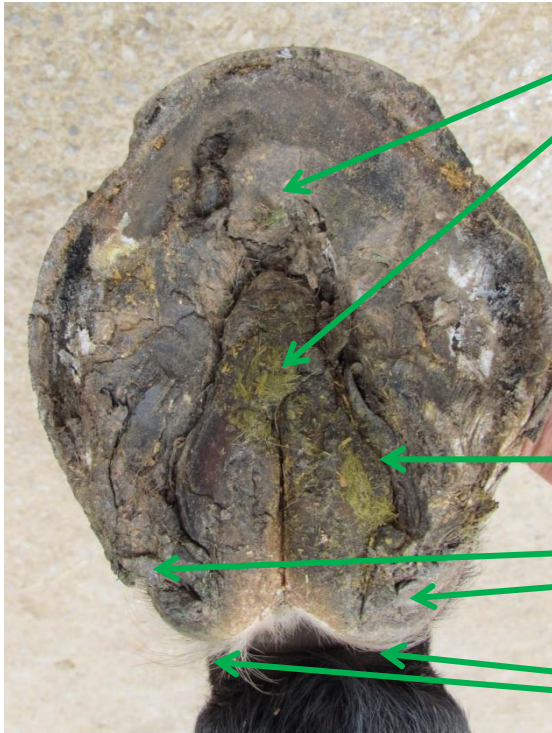
DORSAL SHOT FOR LATER COMPARISON, SHOWING FLARING TO MEDIAL SIDE



HEELS VERY UNDERRUN

HIND FEET

LH ON ARRIVAL 11/06/21 - PRE TRIM



ABNORMAL FROG MATERIAL, SOLE AROUND FROG IS ALSO SHOWING SIGNS OF CANKER

DEEP SULCUS AND SHEARED HEELS – EXTENDING UP INTO HEEL BULBS AND DIGITAL CUSHION

NARROW FROG

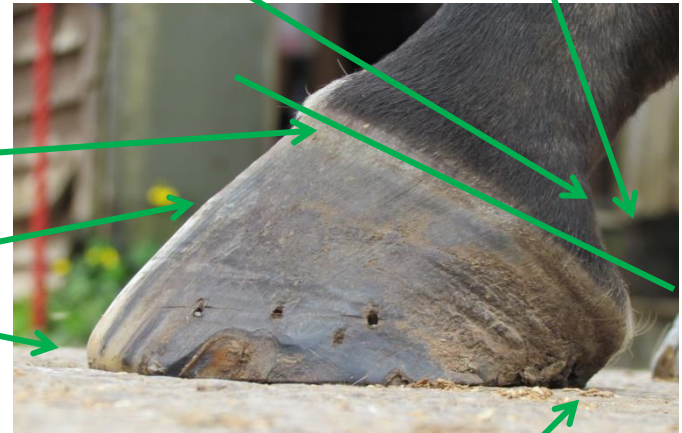
VERY LITTLE HEEL SURFACE AREA
NO BAR

CONTRACTED HEELS



UPRIGHT LATERAL CARTILAGES

THIN AND WEAK DIGITAL CUSHION



LOW HEELS



PROBABLE NEGATIVE PALMAR ANGLE

DORSAL WALL BULLNOSING

LONG TOE & WHOLE FOOT MIGRATING FORWARDS

DORSAL SHOT FOR LATER COMPARISON, SHOWING FLARING TO BOTH SIDES

LEFT FORE SOLAR COMPARISONS – THERE IS 11 MONTHS BETWEEN THE FIRST AND LAST PHOTO

11/6/21 PRE TRIM ON ARRIVAL →



11/6/21 POST TRIM ON ARRIVAL →



29/7/21 48 DAYS LATER →



29/9/21 62 DAYS LATER →



7/12/21 69 DAYS LATER - 6 MONTHS FROM ARRIVAL →



3/5/22 5 MONTHS LATER



The solar shots above show the frog gradually remodelling as the canker disappears and better quality horn grows in, with the sulcus also becoming healthier. The build up of abnormal sole around the frog in the first two pictures is also changing as the solar corium recovers - it has become waxy yellowy repair horn by the third photo, is gradually then being replaced by healthy sole growing in, and is normal by the 7/12 photo. By the last photo the frog material is also completely normal! The heels and frog are uncontracting and becoming wider apart, and the whole foot is rounder (more correct for a horse of this type). The toe is coming back, improving breakover point. The heel surface area is fairly good and the bars, although still false, are straightening. The wall /white line are much healthier too.

LEFT HIND SOLAR COMPARISONS – THERE IS 11 MONTHS BETWEEN THE FIRST AND LAST PHOTO

The Left Hind is showing the same pathologies as the Left Fore. The photos below are taken on the same dates. They generally show the same improvements over the same timescale.

11/6/21 PRE TRIM ON ARRIVAL



11/6/21 POST TRIM ON ARRIVAL



29/7/21 48 DAYS LATER



29/9/21 62 DAYS LATER



7/12/21 69 DAYS LATER -
6 MONTHS FROM ARRIVAL



3/5/22 5 MONTHS LATER



LEFT FORE AND LEFT HIND COMPARISONS - THE BACK OF THE FOOT

THERE IS 11 MONTHS BETWEEN THE FIRST AND LAST PHOTOS

The semi-palmar shots below show the heels and heel bulbs uncontracting and back of the foot becoming wider and fuller. The frog, lateral cartilages and digital cushion in this area of the foot are now much stronger and healthier, so more able to perform their vital shock absorption roles. This means that concussion is lessened on other structures, such as bones, ligaments, tendons and joints. By the photo taken on 7/12, we have an OK foot - the deep frog sulcus' are clear of all Canker, and we have some healing to the sheared heels – I suspect Gus' frogs and digital cushions have some scarring from the Canker damage which may limit this ever being completely normal, but it's a whole lot better than it was!

LEFT FORE

11/6/21 →
POST TRIM ON ARRIVAL

29/7/21 →
48 DAYS LATER

7/9/21 →
40 DAYS LATER

7/12/21 →
6 MONTHS FROM ARRIVAL

3/5/22
11 MONTHS FROM ARRIVAL



LEFT HIND TAKEN ON THE SAME DAYS AS ABOVE



LEFT FORE COMPARISONS – 11 MONTHS IS EASILY TIME TO GROW A WHOLE NEW HOOF CAPSULE

The sequence of lateral and dorsal shots below show the new growth coming down from the coronary band at a much better angle, no new event lines, and less flaring. It is far stronger, better quality hoof horn. By the time of the last photo in each row, Gus had grown a whole new hoof capsule which had been under correct influences, making it healthier and more correct. The whole foot has stopped migrating forwards, and is coming back underneath the limb, easing the breakover at the toe. The heel placement is further back, and just needs slightly more improvement. If you look at the hairline it has stopped 'curling under' at the heels and become straighter, meaning the digital cushion and lateral cartilages here are fuller and stronger – you can see this nicely on the last lateral photo here, and the semi-palmar shots on page 10. This has begun to correct the collapsed internal arch. All of this has created a much better hoof pastern axis – you can see this by comparing the pastern /dorsal hoof wall angles to the ground in the first and last photos. This means less strain on joints, tendons, ligaments and muscles further up the limb too.

Because Gus' feet were initially so poorly, he needs more time to continue developing the best hoof he can. There is a chance his frogs and digital cushions are permanently scarred from the Canker damage, so this could limit the improvement to the back of his feet – Only time will tell. NB In the last Dorsal photo, we have a little minor white line disease, associated crack and disruption at the toe – 2 months later this had cleared up.



11/6/21 POST TRIM ON ARRIVAL →



7/9/21 3 MONTHS LATER →



3/5/22 11 MONTHS FROM ARRIVAL



LEFT HIND COMPARISONS – 11 MONTHS IS EASILY TIME TO GROW A WHOLE NEW HOOF CAPSULE

The sequence of lateral and dorsal shots below show the new growth coming down from the coronary band at a better angle, no new event lines, and less flaring. It is far stronger, better quality hoof horn. By the time of the last photo in each row, Gus had grown a whole new hoof capsule which had been under correct influences, making it healthier and more correct. Although improvements still need to be made to the low heels and plantar angles, we have made a good start, and things are now going in the right direction! The whole foot has stopped migrating forwards, and is coming back underneath the limb, easing the breakover at the toe. The heel placement is further back, and the wall here is at a correct angle. The hairline has stopped 'curling under' at the heels and become straighter, meaning the digital cushion and lateral cartilages here are fuller and stronger – you can see this nicely on the last lateral photo here, and the semi-palmar shots on page 10. This has begun to correct the collapsed internal arch. The dorsal wall has stopped bullnosing, affirming that he is now landing correctly heel first. All of this has started to create a better hoof pastern axis – you can see a slight improvement when comparing the pastern /dorsal hoof wall angles to the ground in the first and last photos. This means less strain on joints, tendons, ligaments and muscles further up the limb too.

Because Gus' feet were initially so poorly, he needs more time to continue developing the best hoof he can. There is a chance his frogs and digital cushions are permanently scarred from the Canker damage, so this could limit the improvement to the back of his feet – Only time will tell.



11/6/21 POST TRIM ON ARRIVAL



7/9/21 3 MONTHS LATER



3/5/22 11 MONTHS FROM ARRIVAL



GUS RETURNED HOME AFTER SPENDING 10 MONTHS WITH US...

WHILST WE TREATED HIS FEET, WE DIDN'T HAVE TO SEDATE HIM, HE HAD NO SURGICAL OR PAINFUL DEBRIDEMENT OF THE INFECTED AREAS, WE DIDN'T HAVE TO CHANGE DRESSINGS, WORRY ABOUT EXPOSED LIVE TISSUE, AND HE WAS ABLE TO BE TURNED OUT 24/7 – EVEN IN THE MUD!



- His owner completely changed his lifestyle!
- He is now in a different environment, with virtually 24/7 freedom to choose paddock, yard or barn, with his new companion
- He is kept on a similar barefoot friendly diet with access to ad lib hay
- His feet are still treated once a week with the Propolis liquid and Red Horse Products as a precaution against the Canker returning...
- Likewise he is still supplemented with the Propolis tablets and some gut support
- Due to his new management and diet his immune system is now just fine!
- His feet are still improving....
- He is comfortable on easy surfaces barefoot, and he wears his boots and pads for anything else
- I am delighted to still be able to look after his feet!

... THE CANKER HAS NOT RETURNED!