

Seedy Toe

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Seedy toe (also known as white line disease) is the invasion and subsequent destruction and consumption of the inner hoof wall keratin by various species of fungi or bacteria or a symbiosis of both. It has the appearance of black paste or crumbly grey/white cheese (pictured right). The resultant cavity is often jammed with grass seeds – hence the name.



Short term effects:

Seedy toe breaks the integrity of the hoof capsule, often resulting in a vertical crack that travels up the hoof wall in tandem with the spread of the pathogens. If left untreated, such cracks will eventually breach the coronary band, resulting in a permanent defect. Seedy toe may also cause acute lameness by forming an abscess (pictured left, showing pus being expressed from a pressurized abscess).

Long term effects:

Seedy toe can be more sinister in the long term if left untreated. Not only can it leave scar tissue in the dermal laminae which becomes a permanent site of weakness in the hoof capsule's integrity, becoming a site that is vulnerable to perpetual invasion, but the pathogens can penetrate the dermal layer and ultimately affect the pedal bone itself, leading to bone infection and bone erosion. (pictured right, comparing both front pedal bones from a horse euthanased due to advanced bone infection)



Prevention

Preventing seedy toe is all about not giving the pathogens a chance to penetrate the fortress of the hoof capsule; in other words maintaining the integrity and strength of the lamellar line by:

1. maintaining the length of the hoof wall so that hoof cracks are not created through mechanical forces.
2. maintaining the health of the lamellar line by preventing laminitis.
3. providing relief from wet environments

Treatment

Seedy toe should be treated as soon as a breach of hoof wall integrity is noticed, especially straight after a trim when it will appear as a small black line that crosses through the lamellar line. At this stage it can be very easily scooped out using a small loop knife. This is a job that home trimmers can safely perform themselves, so long as the loop knife is sharp and is directed outwards away from the sole. Refer pictures below



However, if the seedy toe has already formed a cavity within the hoof's inner wall, it will need to be resected and killed. Resection should only be carried out by experienced trimmers who will use a combination of special resecting nippers and very small loop knives.

It is very important to remove all of the pathogen, which means resecting beyond the visible seedy toe and a small way into the healthy inner wall to ensure removal of penetrating but invisible bacterial spores.

If the resection goes beyond about half way up the hoof wall, a stabilizing patch should be used whilst the cavity grows out.

At that same time, it is vital that a hoof with a resection is properly maintained with no weight bearing at all on the outer wall, maybe even the inner wall depending on the severity of the cavity (again, these parameters should be determined by a professional).

Below a series of photos showing seedy toe treatment from a small crack to a full resection, treatment with peroxide and applying a plate.



For serious cases that travel right up to the vicinity of the coronet band, it is better to gain access to the active edge of pathogen invasion by drilling in through the wall and leaving a 'bridge' of outer wall to hold the hoof together (again, a procedure that should be left to the professional).

Below a series of photos of a hoof that was drilled and the initial treatment of peroxide.



Once a cavity is resected, there is the need for topical treatment to kill any remaining 'bugs'. There is an endless possibility of treating agents; the important thing is to use something that is strong enough to kill the pathogens, but not strong so that the dermal layer is damaged.

Initially a hydrogen peroxide solution (standard 3% concentration) is good to 'bomb' the cavity with because the pathogens are mostly anaerobic. Then for residual treatment it is best to use an agent such as "Black Healer" that is effective against both fungus and bacteria. An effective treatment regime is to treat every day for a week with peroxide and then once or twice a week after that with Black Healer until the cavity has grown out, to ensure that any fresh arrivals of pathogens are killed off. Continue to monitor and treat until fully grown out. Black Healer will effectively remove nearly all stubborn cases of seedy toe.

Avoid using cotton wool to pack cavities because it is hydroscopic (water attracting). Instead try a lock of greasy wool which is hydrophobic.

For hooves permanently damaged and weakened by past seedy toe that has eroded areas of pedal bone, supplementation by MSM (an organic sulphur compound) may boost hoof resilience.

Why should seedy toe be cut out?

Some hoofcare providers are reluctant to resect seedy toe, believing (ignorantly) that it will grow out of its own accord and "she'll be right!"

Unfortunately, the environment that exists within the inner hoof wall provides perfect living quarters for anaerobic organisms to thrive. It is in an oxygen free environment which is moist and warm. Once a seedy toe infection is established within the inner wall, it can stay there indefinitely, feeding on the growing wall.

Resection allows for topical treatment at the active site of infection, as well as introducing oxygen into the equation.

The author has treated thousands of seedy toe cases over many years and can't recall ever causing permanent damage to a hoof through resection.

On the other hand, the author is regularly treating cases of seedy toe that have been left untreated for too long and have become much bigger problems such as eroded pedal bones, permanent wall cracks from the coronet band to the ground and even pedal bone infections. Unfortunately, the end result of some cases has been euthanasia.

To put it bluntly, it is not worth the risk to leave seedy toe untreated. If your hoofcare provider has been telling you to leave seedy toe infections untreated (any longer than a couple of trimming cycles), maybe it is time to seek the service of someone who is willing to address the problem. It's your horse, after all!



Pictured above: Seedy toe damage seen on radiograph. The Horse was very lame. Pictured right, the resected area progressively growing out and the horse is sound again.