



ENDOSCOPY HISTORY AT NEW BEGINNINGS

New Beginnings is a charity that, in its own words, describes its role: “The mission of New Beginnings is to provide a safe and secure environment where former racehorses can adjust and be re-trained for their second career following racing, supported through the following objectives:”

To support racehorses leaving the racing industry, or those that have already left but need support, providing a safe and secure environment in which they can adjust to become ideal riding partners and enjoy a new beginning.

To promote humane behaviour towards racehorses by providing appropriate care, protection, treatment and security for racehorses that are in need of care and attention by reason of sickness or poor circumstances and to educate the public in matters pertaining to animal welfare in general and the prevention of cruelty and suffering among animals.

To promote the versatility of the Thoroughbred and be an established provider in support of the racing industry as part of a network of centres of excellence that deliver the best possible chance of success for former racehorses in multiple equestrian disciplines.

The starting point is the admission to their premises near York, where newcomers are assessed, and suitable management systems implemented. Depending on their condition – and the majority are within the normal parameters – horses are given grazing, dried forage and possibly a fibre feed. With those horses that have undergone the following scoping trial, and they were based on those thought to be at risk from stomach ulcers, Fibre-Beet was introduced at the time of, or straight after the initial scoping, dependant on veterinary recommendation; medication, if recommended, was also implemented:



“Glandular/pyloric ulcers are poorly understood and there are numerous treatment options, all with variable individual response. Promotion of the mucus layer to benefit healing and protection can help and this is advised in the first instance, using feed supplements containing pectins. If there is no improvement, then other treatment options include oral sucralfate, oral omeprazole, oral misoprostol or injectable omeprazole may be advised. “For squamous mucosa; Antacid supplements help to neutralise the acid and can be useful to help prevent recurrence if given frequently. They should be used following treatment and resolution of the ulceration for horses in regular work. Non-molassed sugar beet is a good source of pectins, which help to support and protect the mucus in the glandular region of the stomach, and should be included in the diet.

Small amounts of fibre such as Alfa-A or HiFi fed 15-20 minutes before exercise helps to stimulate saliva production by chewing, which neutralises the acid plus provides a mat in the stomach to absorb the acid.”

Fibre-Beet Mash contains beet pectins, alfalfa and oat fibre, all components described in these recommendations.

ULCERS

The horse's stomach constantly secretes hydrochloric acid. For a trickle eater this is essential as the acid helps prepare food for enzymatic digestion – and microbial fermentation – in the intestines. To protect the stomach lining there are also specialised secretory cells (goblet cells) that produce a mucin that coats the lining' at least in the lower half of the stomach. However, if a horse is fed individual meals, is stressed – and stabling, transport, training and unfamiliar surroundings can all be stress factors – or exercised on an empty stomach (the acid sloshes up into the unprotected portion), there is disruption in normal gastric functioning. Excess acid is not bound within the food and mucin secretion can stop. Stomach linings can be exposed, and the acid can act directly on it causing acid burns, lesions and finally ulceration.

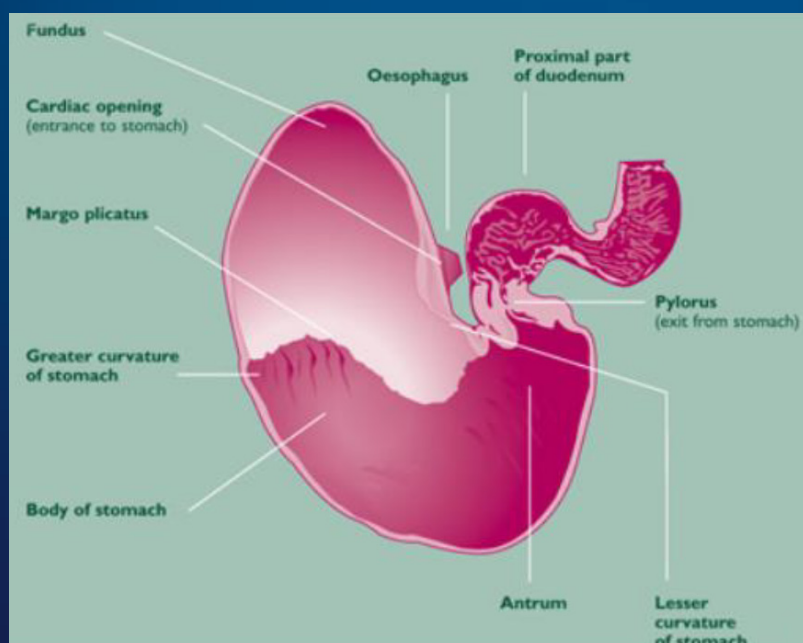
Another factor is the type of feed offered. Cereal based feeds do not soak up the acid well and they also encourage the growth of starch utilising bacteria. These will thrive fermenting the starch, producing lactic acid. Research has shown this acid can quickly penetrate the mucus and open up a path to infection by bacteria similar to *heliobacter*. Once infection has taken hold lesions occur and ulceration follows.

THE TRIALS

Over a period of 14 months, BHF commissioned the scoping of Thoroughbreds, depending on the in-house recommendations at New Beginnings. Based on history, condition and behaviour 7 horses were proposed. Of these, one was clear of ulcers at the first scope. The other six were investigated within weeks of being brought into New Beginnings and subsequently at 2-3 monthly intervals.

Despite their varied backgrounds, the feeding regimes were all based on grazing/hay and fibre feeds. As such the horses were introduced to Fibre-Beet either immediately before, or after the proscripting endoscope.




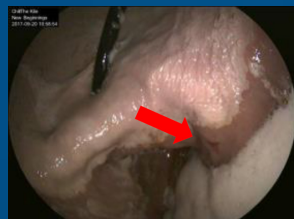





Prior to scoping each horse had its feed withheld, to allow the stomach to empty; following this, a mild sedative was administered, and the endoscope introduced nasally. Examinations, and pictures were taken at the greater and lesser curvatures of the squamous mucosa, the glandular mucosa and the junction of the pylorus:




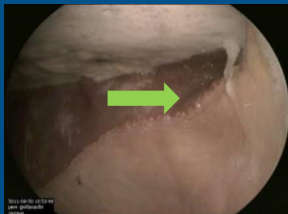



All examinations were carried out by a qualified veterinary surgeon, with certification in endoscopic investigations. On conclusion, horses were returned to their stable, with full access to hay and water.

Full reports were issued for each horse, and discussions taken for the need of subsequent investigations. Summaries of these reports are presented on the following pages:

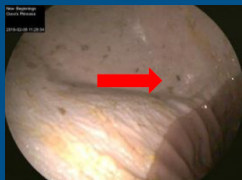
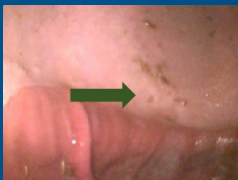



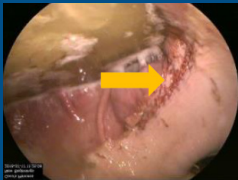
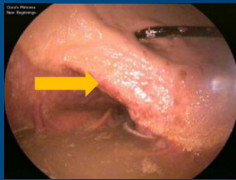
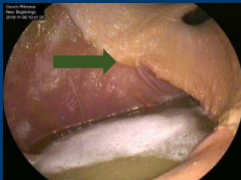

NAME: CHIL THE KITE 8yo TB gelding

FEEDING REGIME:		SUBSEQUENT FEEDING: Introduction of Firbre-Beet	
GASTROSCOPING FINDINGS	1ST SCOPE	2ND SCOPE	3RD SCOPE
DATE:	20/09/2017	02/11/2017	08/02/2018
SQUAMOUS MUSCOSA	Large Grade 3 ulcer at the greater curvature, plus Grade 2 lesions at the lesser curvature	Grade 3 ulcer at the greater curvature improved significantly; very superficial, irregular mucosal surface. Grade 2 lesions at the lesser curvature resolved	Normal greater and lesser curvatures, with full healing of the previous squamous lesions.
GREATER CURVATURE			
LESSER CURVATURE			
GLANDULAR MUSCOSA	Small bleeding ulcer at the lesser curvature	Normal. Mild reddening around the pylorus	Normal.
			
RECOMMENDATION	Treatment with Omeprazole	No further medication	



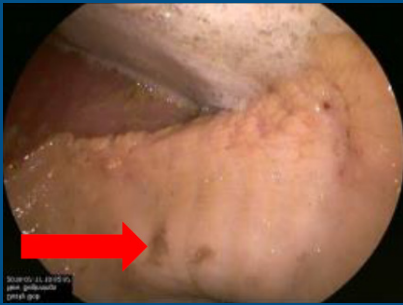
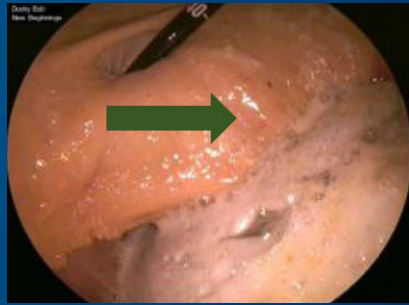

NAME: 'ELMO' (SIR ELMO) 8yo TB gelding

FEEDING REGIME:		SUBSEQUENT FEEDING: Introduction of Fibre-Beet	
GASTROSCOPING FINDINGS	1ST SCOPE	2ND SCOPE	3RD SCOPE
DATE:	29/09/2017	02/11/2017	08/02/2018
SQUAMOUS MUSCOSA	Normal. Irregular margin to margo plicatus at the lesser curvature.	Irregular margin to margo plicatus at the lesser curvature, as before.	Irregular margin to margo plicatus at the lesser curvature, as before.
GREATER CURVATURE			
LESSER CURVATURE			
GLANDULAR MUSCOSA	Linear reddening in the glandular mucosa; numerous small focal bleeding ulcers in the pyloric antrum.	Resolution in the glandular mucosa; the previous focal bleeding ulcers in the pyloric antrum had improved significantly and only small regions of reddening remained.	Single small focal lesion seen in pyloric antrum.
			
RECOMMENDATION	Introduce Fibre-Beet		



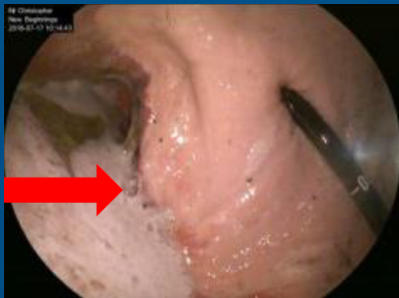
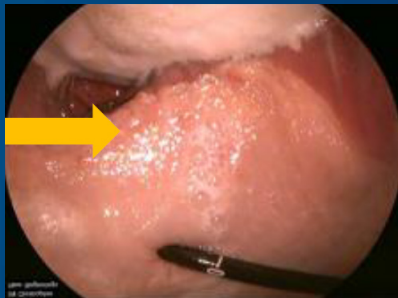


NAME: 'COCO'S PRINCESS' TB mare

FEEDING REGIME: Forage, Fibre feed		SUBSEQUENT FEEDING: Forage, Fibre Feed, Fibre-beet		
GASTROSCOPING FINDINGS	1ST SCOPE	2ND SCOPE	3RD SCOPE	4TH SCOPE
DATE:	29/09/2017	02/11/2017	08/02/2018	06/11/2018
SQUAMOUS MUSCOSA	Grade 1 linear ulceration around the greater curvature, plus Grade 3 lesions at the lesser curvature	Normal greater curvature; linear Grade 1-2 lesions along the lesser curvature.	Normal greater curvature; linear Grade 1-2 lesions along the lesser curvature.	Mild bile staining and hyperkeratosis at the greater and lesser curvatures; full healing of the previous ulceration along the lesser curvature.
GREATER CURVATURE				
LESSER CURVATURE				
GLANDULAR MUSCOSA	Normal	Normal	Normal	Normal
				
RECOMMENDATION	Introduce Fibre-Beet Mash			

NAME: 'DUSKY BOB' 13yo TB gelding

FEEDING REGIME:		SUBSEQUENT FEEDING: Introduction of Fibre-Beet
GASTROSCOPING FINDINGS	1ST SCOPE	2ND SCOPE
DATE:	17/07/2018	21/08/2018
SQUAMOUS MUSCOSA	Grade 2 ulceration and hyperkeratosis at the greater and lesser curvatures.	The previous squamous ulcers have healed and only hyperkeratosis remains
GREATER CURVATURE		
LESSER CURVATURE		
	Normal.	Normal.
GLANDULAR MUSCOSA		
RECOMMENDATION	Introduce Fibre-Beet Mash	

NAME: 'MR CHRISTOPHER' 6yo TB gelding

FEEDING REGIME:		SUBSEQUENT FEEDING: Introduction of Fibre-Beet
GASTROSCOPING FINDINGS	1ST SCOPE	2ND SCOPE
DATE:	17/08/2018	21/09/2018
SQUAMOUS MUSCOSA	Normal greater curvature. Focal area of hyperaemia to the left of the lesser curvature.	Normal greater curvature. The previous focal area of hyperaemia to the left of the lesser curvature appeared much smaller.
GREATER CURVATURE		
LESSER CURVATURE		
	Focal mild hyperaemia around the pylorus.	Focal raised.
GLANDULAR MUSCOSA		
RECOMMENDATION	Introduce Fibre-Beet Mash	

Mean Ulceration Score

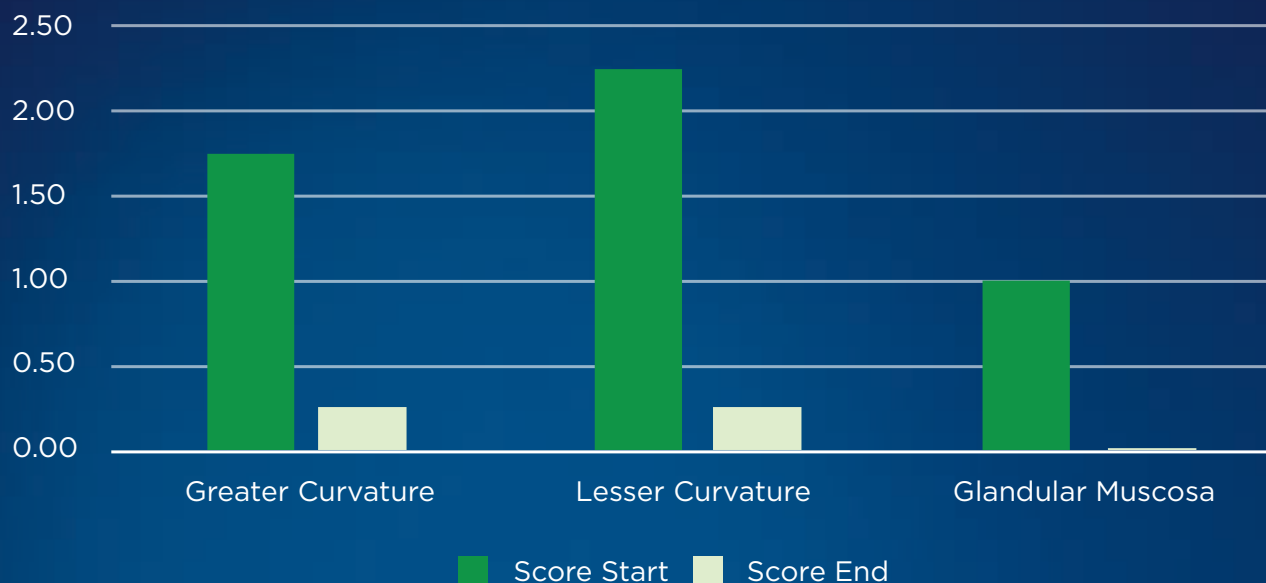


Figure 1. Average ulcer scores across the trial period.
(Individual undergoing omeprazole medication scored from 2nd scope)

RESULTS SHOW:

Varying incidences, positioning and severity of ulceration

Time frame for improvement from within 5 weeks,

All ulcers improved over the length of the trial

Only 1 Greater Curvature ulcer not fully resolved, but improved

Only 1 Lesser Curvature ulcer not fully resolved, but improved

Only 1 Glandular Mucosa ulcer not fully resolved, but improved

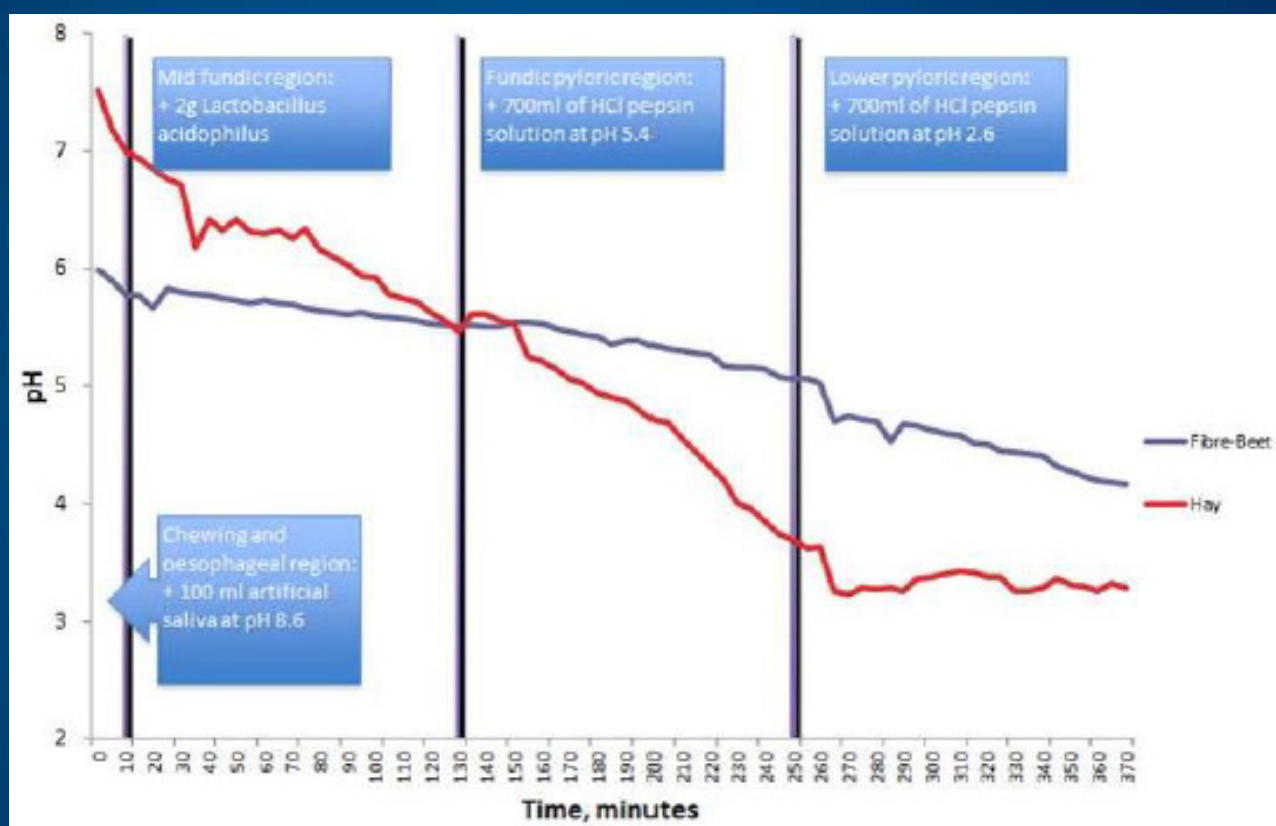
Only 1 initial treatment with omeprazole

Gastric scores improved for all horses with the majority being completely resolved.

CONCLUSION

There was one situation where it was decided that medication was needed as the severity of the squamous ulceration was severe, and likely to be causing pain. Although a beneficial feeding regime was likely to restore gastric integrity – as was seen with the other horses – there is a moral requirement to alleviate suffering. Once an initial improvement was achieved with omeprazole, the introduction of Fibre-Beet was done.

Fibre-Beet Mash is a product that has been awarded the BETA feed approval mark for horses prone to gastric ulcers. It contains components such as pectins and emulsifiers that have been shown to support the mucosal lining of the stomach, and ingredients that have a high acid binding capacity: this absorbs excess acids and helps maintain gastric acidity at “safe levels”. Work undertaken at Glasgow University support this data:



Fibre-Beet Mash does not medicate ulcers. However, it does provide physiological and physical characteristics that help support normal gastric conditions and so helps support the dietary approach to gastric ulceration.

Gastric ulcers are not obvious from the outside, and scoping is not an option for most people; so introducing Fibre-Beet Mash, alongside a fibre-based diet, can give you piece of mind.