BISHOPTON EQUINE VETS

RCVS ACCREDITED PRACTICE EQUINE PRACTICE

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November Newsletter

XL Vets Equine

The weather finally turned and the cold has allowed us to organise the autumn dose of wormer for the clients on the scheme. If anyone wants more information on worming or the scheme, call the surgery and get signed up for next year. We are also planning to offer a tapeworm test for the members, but details will be sent out separately. The only other housekeeping element is facemasks… although the office is a place of work, clients entering the stocks and exam room will be required to wear a face mask as per the new(ish) government guidelines – thank you in advance!

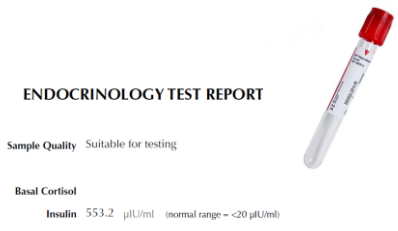
'Flu Vaccinations

British Horseracing Authority confirmed last month that racing thoroughbreds will be required to have six-monthly 'flu boosters from January 1st 2022. This is more significant than any change before as this is boosters within or at 6 months, or the vaccinations are out of date - not annually as was historic. FEI rules have been consistent for years, requiring a vaccination within six months of competition, but they allowed annual boosters to maintain vaccination status oustside of this.

Given the changes to the TB's and the way that vaccination status is being perceived throughout the competition regulatory bodies, we would encourage all our clients whose horses compete at even a lower level to consider six monthly vaccinations – better to be ahead of any rule changes. If you want to speak to us about it please get in touch or ask when booking in.

Could EMS cases benefit from new available treatments?

Equine Metabolic Syndrome (EMS) is a hormonal disorder that we see far too often nowadays and is inevitably associated with clinical issues such as insulin resistance, obesity and laminitis. EMS increases cortisol concentrations and adipokines (endocrine fat cells), affecting insulin levels in the body (insulin dysregulation). This can result in high circulatinginsulin levels which can be toxic to certain cells, most obviously, the cells used in hoof wall production. These are particularly susceptible to damage from these increased insulin levels causing conditions such as laminitis, solar abscesses, and white line disease. *Cont…*


ENDOCRINOLOGY TEST REPORT

Sample Quality Suitable for testing

Basal Cortisol

Insulin 553.2 µIU/ml (normal range = <20 µIU/ml)

Insulin and the risk of laminitis

In one study1 on ponies with hyper-insulinaemia, where insulin levels were recorded to reach approximately 1035ulU/ml, all the ponies developed clinical laminitis. It showed a direct effect that high insulin levels had in causing laminitis in a short space of time. In a further study2 when horses were given high doses of glucose, insulin levels rose to approximately 200ulU/ml, with a resulting sub-clinical laminitis.
From these studies it was concluded that even a small increase in insulin levels is potentially toxic to the cells in the hoof wall and will result in laminitis.

Current EMS treatments

Obesity management through diet and exercise are the main treatment method of EMS, but when medical intervention is required, metformin has been the drug of choice. Metformin reduces glucose production from the liver, affects glucose absorption and improves insulin sensitivity. Combined with exercise and diet, it can help reduce the circulating insulin levels and reduce the laminitis risk.

What is Ertugliflozin L-pyroglutamic acid? (other than impossible to say)

EMS has similarities to type 2 diabetes in humans and like Metformin, Ertugliflozin has been a successful treatment used in human medicine. Ertugliflozin has only recently become available for use in horses and is showing promising results in reducing insulin levels in ponies with EMS.
Ertugliflozin is a SGLUT 2 inhibitor, so it blocks receptors in the kidney to prevent reabsorption of glucose and thus lower insulin levels. Ertugliflozin has been shown to lower insulin levels in 2-4 weeks and to drastically improve the clinical comfort of ponies with acute and chronic laminitis.

How would treatment compare to Metformin?

	Metformin	**Ertugliflozin**
Cost	£1-2 a day for approx. 500kg horse	£3-4 a day for approx. 500kg horse
Treatment plan	Daily. long-term treatment	Daily. Short treatment courses when needed, based on insulin levels
Monitoring	- Initially blood tests are done 1-3 monthly - Once insulin is stable, blood tests can be done 6-12 monthly onwards	- Baseline blood test done at the start of treatment - Repeat bloods at 2 and 4 weeks into treatment - Once insulin is stable, blood tests can be done 3 monthly onwards

Can Ertugliflozin help your horse or pony?

- Is your horse is still suffering laminitis episodes despite a strict diet and exercise regime?
- Do you feel your ponies' clinical signs aren't improving even with the additional Metformin treatment?
- Despite treatment, your horses' insulin levels remain high with regular blood sampling?

If any of these apply to your pony, call the practice today to discuss the options with the clinical team. Ellie Marshall Smith has been looking at this and she's more than happy to chat it through with anyone who's concerned or interested.

References
1. Asplin, K.E., Sillence, M.N.,Pollitta, C.C., McGowan, C.M. 2007. Induction of laminitis by prolonged hyperinsulinaemia in clinically normal ponies. The Veterinary Journal. 174 (3), 530-535.
2. de Laat, M.A., Sillence, M.N., McGowan, C.M., Pollitt, C.C. 2012. Continuous intravenous infusion of glucose induces