

## **Hyperlipaemia – A Personal Experience**

One summer's afternoon several years ago, I was walking around the paddocks checking the ponies. They had been checked earlier that morning and had all appeared happy & healthy. As I walked over to the ponies, one of the mares, Saffi, didn't even acknowledge my approach, which was unusual for her. I noticed she had flies sitting along her back which she was making no effort to twitch off. Her foal was stood next to her, and even when he nudged her she didn't respond to him. My inner feelings told me that something was very, very wrong, and I immediately called the vet.

When the vet arrived, he noticed a slight swelling under her stomach, running lengthwise along her midline. She was still very unresponsive, was beginning to show signs of dehydration, her mucous membranes had begun to look faintly pale & off-colour, and her milk had begun to dry up. We took the decision to hospitalise Saffi for fluids, further tests & treatment.

I stayed with Saffi at the hospital while she was connected to a drip, had a peritoneal tap and internal scan, and bloods were taken. These gave us an answer, and a diagnosis. Hyperlipaemia & liver damage. Saffi was installed in a box in the Intensive Care Unit of the hospital, and the battle to save her began. By now it was late at night, and I left her in the vet's capable hands and under constant supervision.

The following day we visited Saffi, and she seemed brighter, had begun to try to eat and was responding to things around her. It was looking promising. Her milk had dried up so her foal was being bottle-fed, but he seemed to be doing well. The vets even began to talk about her going home in a day or two if she continued to progress so well.

Sadly, it was not to be. Very early the next morning, the vets called to tell us that Saffi had gone down in her box in distress. Tests showed her liver had completely failed, and they felt there was nothing more that could be done; that the kindest thing would be to put her to sleep. Within 36 hours we had gone from a completely healthy pony, to having a seriously ill pony euthanised, leaving us with an orphan foal. A foster mother could not be found, so we hand-reared him ourselves. While it was difficult at first, he progressed well, and today is a healthy three year old colt who looks very much like his dam, and is a great reminder of a wonderful mare.

Until we lost Saffi, I had never heard of Hyperlipaemia. I began to do some research, and quickly came to realise it was a condition that every Shetland owner should be aware of. While it has been reported in many breeds (including TBs, Arabs, Quarter Horses, etc), Shetland ponies (and donkeys!) are at a much higher risk of getting Hyperlipaemia. Prognosis for the disease is poor; the death rate is high, with figures quoted at anything between 60 – 100%.

Hyperlipaemia occurs when the pony either is not getting sufficient nutrition from what it is eating, stops eating totally or cuts back severely, for whatever reason. The cause can either be due to an illness or condition, or due to sudden restriction of food by an owner. When the food is restricted in this way, the pony's body still requires an energy supply, so the body begins to draw on the pony's fat deposits to use as energy. Fatty acids enter the bloodstream, and are sent to the liver to be converted to glucose for the body to use. As this occurs, the body should release hormones which should control how much fat is taken from the fat stores. Unfortunately it seems that in affected ponies, this is where it all goes wrong. Fat continues to be taken from the pony's fat stores, and the blood begins to fill with

this excess fat. The excess fat causes the liver & kidneys to struggle, and eventually to fail. Ultimately all the organs in the body will fail, damage is irreversible, and death follows soon after.

There are many causes and risk factors for Hyperlipaemia. Female animals are more likely to develop it than males, and this risk is further increased during pregnancy or while feeding a foal at foot, as the body requires higher levels of nutrition. Animals which are fat or obese are at greater risk, especially if their available food is drastically reduced very suddenly. More older animals are reported with the disease, though it has been found in all ages including foals. In the case of older animals there can be a link to the condition of the teeth, making it harder for the older animal to get enough nutrition. Stress can be a factor, with a change of management or diet, transportation and poor weather conditions all being possible contributory factors. Illness can also be a factor, with laminitis, colic, tumours, worm burden and Cushing's Disease, amongst others, all being possible root causes.

The most common symptoms of Hyperlipaemia are jaundice, diarrhoea, weight loss, loss of balance or lack of coordination, head pressing, playing with water or hanging over water but actually drinking very little, lethargy, lack of appetite or swelling under the abdomen. Reduced quantities of droppings, high temperature, circling movement, high heart rate, skin lesions or bad breath may also be seen. In the later stages, the animal may collapse or have seizures.

Precautions which may help to ward off Hyperlipaemia include controlling weight so that ponies never end up fat or obese, making sure animals have sufficient shelter in poor weather conditions, rugging older vulnerable animals, keeping animals regularly wormed, providing supplementary feeding or field keep blocks for animals with sudden extra dietary requirements such as mares with foal at foot, having teeth checked regularly or if there is any suspicion of any problems, exercising ponies (this helps in the body's release of insulin which is a factor), and being cautious when placing any pony on a diet. In the case of dieting ponies, it is important to make sure that the pony still receives regular quantities of food, but just of the lower calorie type, so hay which has been soaked for 12 hours, straw, low-calorie chops, laminitic safe feeds & balancers should all be considered as an alternative to just feeding the pony a significantly reduced quantity of food.

Once Hyperlipaemia is suspected, a vet should be called on an emergency basis. This disease usually strikes fast, and needs urgent action if there is to be any chance of survival. A blood test will generally confirm suspected diagnosis; often the fat can actually be seen sitting in the blood with the naked eye. Any underlying cause will need to be treated (i.e. worm burden, colic, or other illness). The pony will need to be tempted to eat if it has stopped. If it cannot be encouraged to eat, syringing glucose into the pony's mouth (with vet's agreement) can be useful. Mares with a foal at foot may need the foal weaned, assuming their milk has not already dried up. If the pony is very ill, stomach tubing or intravenous fluids may need to be administered. Antibiotics, anti-inflammatories and other medication may also be needed. The pony may have to be hospitalised for intensive nursing & treatment due to the poor prognosis with this illness, and unfortunately a successful outcome is not guaranteed.

I hope that others may learn from my experience, and that what happened to Saffi can help other Shetland owners become more aware of this condition. They will hopefully be more able to spot the signs of Hyperlipaemia early, and there is a better chance that their pony may survive or even not develop this terrible condition in the first place.