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## Monday morning sickness in draft purpose Bhutia ponies: A case report

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### Abstract

The present paper describes the case of Monday morning sickness or Azoturia in three draft Bhutia ponies and its successful treatment with the history of anorexia, anuria and reluctant to move since the previous two days of reporting. The animals were already treated for colic and lameness with no improvement in their conditions. One of the three ponies died soon after some time of being presented to the hospital, and post-mortem, history and other clinical signs revealed the condition to be Monday morning sickness. The animals were restrained and treated with Dexona, NSAID, muscle relaxant, phosphorous, fluid and balanced electrolyte therapy and multivitamin, along with the advice of a diet rich in fats and low in carbohydrates and very minimal exercise. After a month, the ponies showed uneventfully recovery.

**Keywords:** Bhutia, ponies, Monday morning sickness, azoturia

### 1. Introduction

Monday morning sickness, azoturia, exertional rhabdomyolysis or tying up is one of the most common muscle disorder in horses. The clinical signs include stiff and stilted gait with excessive sweating, high pulse & respiration rates during or after exercise, reluctance to move hindquarters & in severe cases signs of colic may be seen. Firm painful muscles may be palpated over the back & hind limb muscles, and myoglobinuria (coffee colored urine) is a classic feature of severely affected horses which results from the kidneys filtering myoglobin (a muscle protein) from the blood. The present paper reports a case of Monday morning sickness in ponies.

### 2. Case history and Observations

Three draft purpose Bhutia ponies of approx. 300 kg body weight were reported to be anorexic along with a history of anuria and reluctance to move since the previous two days of reporting. The animals were kept at rest for a period of 3-4 months, and without pre-conditioning them, they were suddenly allowed to carry loads for long distances. The animals were already treated for colic and lameness with no improvement in their conditions. One of the three ponies died soon after being presented to the Veterinary Hospital at Jang, and its post mortem showed typical coffee colored urine, enlarged kidneys with ruptured capsule and sub-capsular echymotic hemorrhage with myoglobin content over the cut surface (Fig. 1, Fig. 2 and Fig. 3). Clinical observations revealed dehydrated conditions with congested mucous membranes, profuse sweating, muscle spasms or cramps, with stiff/ hard and painful muscles (especially the hindquarters) when palpated. The animals were reluctance to move, and exhibited stiffness or shortened gait when they were forced to move. There was an elevated heart and respiratory rates, along with shifting of weight from one side to other side. Based on amnesia and typical clinical symptoms and evidence of carrying load after a long period of rest, it was suspected to be a case of Monday morning sickness or, Azoturia.



**Fig 1:** Dark coffee coloured urine



**Fig 2:** Presence of myoglobin in the kidney



**Fig 3:** Enlarged kidney with ruptured capsule and echymotic haemorrhage

### 3. Treatment and Discussion

The horses were removed from solid floors and kept on softer ground. The treatment was started with Dexamethasone @ 15ml (10 ml I/M and 5 ml I/V) followed by profuse fluid therapy with Normal saline, Ringer's lactate and Dextrose at the ratio of 50: 25: 25 I/V. The fluids were infused until the animals started to urinate, and a total of about 24-25 litres of fluids were infused over a period of 24 hours. This was repeated for a period of about 15 days, until the animals started to recover and consumed feed and water normally. Dextrose infusion was stopped and the animals were maintained with Normal Saline and Ringer's Lactate at the ratio 70:30 for the following 15 days. Xylazine Hydrochloride (@ 1 mg/kg b.w. I/V b.i.d. daily for 5 days), Tonophosphan® Vet, MSD (@ 1 ml/ 30 kg b.w. I/M once daily for 5 days, the dose being distribute over several sites), Meloxicam (@ 0.2 - 0.3 mg /kg b.w. I/M twice daily for 10 days), E-SE®, Merck Animal Health (@ 1ml/ 45 kg b.w. I/M at stat and repeat after 5 and 10 days) and Tribivet®, Intas Phaermaceuticals (1 ml/30 kg b.w. I/M at stat and on alternate days for 10 occassions) were infused/ injected to the animals, and without

showing any negative response, they recovered uneventfully after a month. Throughout the period of treatment the animals were provided softer beddings with a diet low in carbohydrates and rich in fat and brans.

The basic aims of treatment for exertional rhabdomyolysis (ER) in affected animals are to limit further muscle damage, reduce pain and to restore fluid & electrolyte balance to promote kidney function (Rossier, 1994) [2]. If dehydration is evident, I/V fluids are indicated before other drugs are administered (Turner, 1992) [4], which restore fluid and electrolyte balance, and prevent the possibility of renal failure induced by NSAIDS in the dehydrated animal (Rossier, 1994, Valberg *et al.*, 1997) [2, 6]. Since renal failure is also a possibility in horses with myoglobinuria, aggressive fluid therapy is required to prevent renal damage by elevated serum creatinine and urea nitrogen levels (Valberg *et al.*, 1997) [6]. Large quantities of I/V polyionic balanced electrolyte fluid (50-100 litre) must be given over a period of 24 hours which also minimizes secondary myopathy. For muscle relaxant, among most of the agonist of the alpha-2 receptor, Xylazine is an extensively studied agent and is more economical to use than other  $\alpha_2$  agonist (Seo *et al.*, 2011) [3]. Xylazine is used for sedation, anesthesia, muscle relaxation, and analgesia in animals such as horses, cattle and other non-human mammals (Xylazine at drugs.com). Further, horses showing signs of moderate to severe generalized muscle cramping and pain, often become more comfortable after administration of nonsteroidal anti-inflammatorydrugs (NSAIDS) (Knoepfli, 2002) [1].

Reducing any extra energy in a horse's diet is essential to maintaining a horse that has experienced ER. This can usually be accomplished by decreasing carbohydrates and increasing the daily intake of hay or pasture combined with balanced vitamin, mineral, and electrolyte supplementation (Valberg, 1998) [5]. Horses with ER must receive the minimum number of calories necessary to meet their energy needs (Turner, 1992) [4]. Foods high in fat, such as rice bran, corn oil, or commercially available soy bean-rice bran, may be used if additional calories are necessary. High fat diets may help to change the nervous behaviour of an affected horse or stabilize muscle membrane components (Valberg *et al.*, 1997) [6].

### 4. Summary

A case of Monday morning sickness was discussed and successfully treated.

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