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Colic in horses due to torsion of intestine

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Abstract

Colic is a frequent and important cause of death in horses and donkeys to these species of animals. The predominant reasons for death were stomach rupture, strangulating lesions or enteritis. Colic due to torsion of intestine was investigated during routine necropsy examination of horses conducted over a period of one year. A total of 15 horses were necropsied out of 15, five horses were dead due to torsion of intestine at jejuna region. At torsion place there was severe congestion with haemorrhages, area become intense bright red in colour. There was severe congestion of liver, spleen, kidneys, lungs and heart. Torsion of intestine leads to complete blockage of the intestine and also blood supply at the region lead to necrosis. It is the most lethal forms of Colic. Complete obstruction causing severe in tolerable pain and shock due to intestinal infarction and bacterial toxins that pass into the blood stream.

Keywords: Horses, colic, torsion, intestine

Introduction

Horses, donkeys and mules are monogastric animals; colic is commonly observed in these animals. Colic is defined as any gastrointestinal pain which is considered as the major disease state in horses and donkeys causing severe abdominal pain. Colic is a frequent and important cause of death in these species of animals. The predominant reasons for death were stomach rupture, strangulating lesions or enteritis. The etiological agents to this clinical syndrome are several including disease base on system that classifying the cause of colic as obstructive, displacement, gas, parasite, and enteritis (Radostits *et al.*, 2007 and Temesgen Bihonegn and Fasika Bekele, 2018) ^[9, 6]. Gastrointestinal tract is most important source of colic (Robertson and Sanchez, 2010) ^[7] and also some risk factors (breed, age, managemental factors) that increase the prevalence of colic in equines (White, 2006) ^[8]. As there is spasm of digestive system, major sign is the pain which manifested by pawing, stamping, kicking or rolling (Radostits *et al.*, 2007 and Temesgen Bihonegn and Fasika Bekele, 2018) ^[9, 6]. A twist in the small intestine of a horse results in cut of the blood supply which may lead to necrosis. It is the most lethal forms of equine colic. In view of this fact, present study highlights the incidence of colic due to torsion of intestine in during routine necropsy examination.

Materials and methods

Colic due to torsion of intestine was investigated during routine necropsy examination of horses conducted over a period of one year. A total of 15 horses were necropsied out of 15, five horses were dead due to torsion of intestine. The carcasses were thoroughly examined externally for any abnormalities. The physical condition of the animals was good and the carcasses were bloated. On post-mortem examination, the small intestine was twisted on its axis at jejuna region. Intestine and liver tissues were processed, sectioned, stained routinely with H&E. Feed in the stomach was analysed for parasitic infestation.

Result and discussion

A total of fifteen horses were necropsied out of which five were diagnosed colic due torsion of intestine. Before the death of the animal, the clinical signs shown were increased attention toward the abdomen, including flank watching (turning of the head to look at the abdomen and/or hind quarters), nipping, biting, or kicking (Bentz and Bradford, 2014) ^[5]. Based on the post-mortem examination; stomach and intestine were distended by ballooning filled with excess gas accumulation (Fig. 1 and Fig. 2). There was a twist in the intestine at jejuna region (Fig. 3). At torsion place there was severe congestion with haemorrhages, area became intensified bright red in colour (Fig. 4).

There was severe congestion of liver, spleen, kidneys, lungs and heart. Torsion of intestine leads to complete blockage of the intestine and also blood supply at the region lead to necrosis (Fig. 4). It is the most lethal forms of equine Colic (Sandhya morwal *et al.*, 2017) [1]. Occlusion of the blood supply means that it is a painful condition causing rapid deterioration (Reed *et al.*, 2010) [2]. Complete obstruction causing severe in-tolerable pain and shock due to intestinal infarction and bacterial toxins that pass into the blood stream (Smith *et al.*, 2002, Ferraro, 2008 and Sandhya morwal *et al.*, 2017) [3, 4, 1].



Fig 1: Bloated horse



Fig 2: Severe congestion of the part of small intestine involved in torsion and ballooning of intestine with excess accumulation of gases due to torsion



Fig 3: Area of torsion in the small intestine



Fig 4: Severe congestion with haemorrhages and necrosis of the small intestine at the area of torsion

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