



Rectal Prolapse Associated with Constipation in a Curly Colt (Case Report)

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INTRODUCTION

Rectal prolapsed-*proidentia*, is a bulging of all layers of the rectal wall through the anal channel to the external environment. It was first described in Ebers Papyrus as early as 1500 BC Cech *et al.*, (2010), it occurs when support and fixation mechanisms (fascia, muscles, ligaments) are overcome by pressure (straining caused by constipation, diarrhoea, coughing) or the support tissues are weakened (fat or tumour infiltration, genetics, certain drugs or oedema due to mycotoxins, particularly zearalenone) (Smith and Straw 2006; Osweiler 2006). Prolapse of rectum occurs commonly in pigs, occasionally occur in cattle, and rarely seen in other species (Rodostits *et al.*, 2000). In the horse it is usually due to straining from diarrhea, dystocia, intestinal parasitism, colic, prostatitis, and rectal foreign body (Rick, 1989). A cause is not identified in many cases. In rare cases, the prolapse is caused by a well-defined rectal tumor. Any sex group can be affected, but the condition is more common in females than males (Turner, 1980).

Rectal prolapse are classified according to the structures involved. In type I rectal prolapse, only the mucosa of rectum projects through the anus, sometimes more on one side than the other (David and Benson, 1992). A type II lesion is a complete prolapse of all or part of the rectal ampulla (David and Benson, 1992). Type I and II prolapse are the most common (Turner, 1980). In a type III prolapse, a variable portion of colon intussuscepts into the rectum in

addition to type II prolapse being present (David and Benson, 1992). In type IV prolapse, the peritoneal rectum and variable length of colon intussuscepts. This type of prolapse is seen after dystocia in mare (Rick, 1989). A rectal prolapse can be diagnosed and classified by inspection (David and Benson, 1992). An elongated, cylindrical mass protruding through the anal orifice is usually diagnostic. However, it must be differentiated from prolapsed ileo-ceco colic intussusceptions by passing a probe, blunt instrument, or finger between the prolapsed mass and the inner rectal wall. In rectal prolapse, the instrument cannot be inserted due to the presence of a fornix Cynthia, (2005), this is very important in differentiating rectal prolapse and ileo-ceco colic intussusceptions.

Case History: An eight months white curly colt of about 182 kilogram body weight was presented to the Veterinary Teaching Hospital, Usmanu Danfodiyo University, Sokoto with a chief complaint of protruded mass around the anal region seven (7) hours prior to presentation (Plate I).



Plate I: The Colt at Presentation in the Chute



Plate II: Prolapsed Mass with Discharging Fluid Devoid of Laceration

History further revealed that, the colt was brought from Niger republic with one other stallion about two weeks prior to presentation. They were kept in one stable, fed on millet, wheat bran, and hay. There was no history of previous medication and vaccination.

Physical Examination: A pinkish mass was found around the perineal region. The mass was edematous and discharging clear serous fluid (Plate II). The colt was seriously straining and grinding its teeth. Pulse and respiratory rates were 45 beats per minute and 18 cycles per minute respectively. The colt continued straining during clinical examinations. 15ml of 2% Lidocaine hydrochloride was administered through caudal epidural space between last sacral and first coccygeal space according to standard procedure describe by Jones (2001). The epidural anaesthesia was administered to control the straining.

Laboratory Examination: Hard fecal sample which was obtained during clinical examination was analyzed in the parasitology laboratory in the department of Veterinary parasitology and entomology, Usmanu Danfodiyo University, Sokoto. The result was negative for any helminth or protozoan eggs/Oocyst

Management: The prolapsed rectum was thoroughly washed with normal saline and mild Purit[®] antiseptic solution (Chlorhexidine Gluconate B. P 0.3%W/V, Cetrimide B. P 3%W/V, Saro LifeCare Limited, Lagos, Nigeria). The prolapsed mass was examined and found to be devoid of lacerations (Plate II) prior to returning the prolapsed tissue into the normal position after reduction of the oedema using super saturated solution of glucose D.

Purse string suture using nylon monofilament (Shenzhen, China) size 3 was applied to retain the prolapsed tissue within the pelvic cavity (Plate III). Penstrep[®] (Invesa, industrial Veterinaria, Spain) injection (procaine penicillin G 200mg and dihydrostreptomycine sulphate 250mg at dose rate of 200,000 I. U./kg intramuscularly for five days, multivitamin injection (Multinor[®] Nigeria) 18mls intramuscularly for three days and 2.5% albendazole suspension per os at dose rate of 7.5mg/kg once were administered to the colt.



Plate III: Post Reduction and Application of Purse String Suture using Nylon Size 3

Post Management Therapy: An hour after the correction, the prolapse recurred, the purse string sutures that were put in place had broken and the colt was still seriously straining. Caudal epidural anaesthesia was also administered; the prolapsed mass was again returned into the pelvic cavity. The colt was hospitalized and monitored closely, bland diet was given throughout the period of hospitalization and Muko® paraffin oil (Invesa, industrial Veterinaria, Spain) was also given to lubricate the gastro intestinal lining to ease evacuation of faeces. By the 5th day post treatment the colt had stopped straining and retention sutures were removed.

DISCUSSION

The common causes of rectal prolapse include enteritis with profuse diarrhea, violent straining such as occur in coccidiosis in young animals, in rabies sometimes, in spinal cord abscess, when pelvic organs are engorged and pelvic fracture when complicated with loss of anal tone ((Rodostits *et al.*, 2000; Olivier *et al.*; 2001; Lee *et al.*, 2010). The case at hand was caused by violent straining due to constipation as a result of feeding the patient with highly dried feed (millet, wheat bran and hay) probably with less water supplementation. There was no previous history of feeding from the former

owner to ascertain dietary changes, but there is possibility of dietary changes that probably lead to constipation and subsequent occurrence of the rectal prolapse. Rectal prolapse in horse is mostly associated with intestinal parasitism (Popovitch *et al.*, 1994; Bertelsen *et al.*, 2004; Anderson and Miesner, 2008), but in the case at hand there was no parasite found following fecal examination, but the colt was seriously straining and the fecal materials evacuated in the course of clinical examination were hard suggesting constipation which could probably lead to scratching of the rectal mucosal wall and subsequent damage to the anal sphincter nerves thereby leading to protrusion of the anal mucosa. The colt might have been recently treated against intestinal parasite before the owner sold it out but the intestinal have seriously affected that may likely bring about the rectal prolapse. Despite the fact that rectal prolapsed in other species other than equine is common, the frequency/prevalence rate of the condition is low and there are very few or no reported cases in Nigeria of equine rectal prolapse associated with constipation. On this basis, we therefore recommend that, adequate water should be always provided to both young and old horses when excessive dry feed is being offered for their feeding, this will likely reduce the chances of constipation, that may likely predisposed to violent straining leading to prolapse of the rectum as in this case.

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