Management of Rectal Prolapse in a Hamster- A Case Report

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Abstract

A combination of Xylazine at 10 mg/kg and Ketamine at 100 mg/kg by intraperitoneal route was found adequate for providing surgical plane of anaesthesia in hamster. Successful management of rectal prolapse in a hamster was performed using purse string sutures.

Key Words: Anaesthesia, Hamster, Rectal Prolapse.

1. Introduction

Hamster belongs to order rodentia, suborder Myomorpha and family Cricetidae. Characterized by large cheek pouches, thick bodies, short tails, excess of loose skin, continuously growing incisors and cuspidate molars that do not continue to grow. Rectal prolapse is a common clinical problem in other laboratory animals also. In mice it is thought to be predisposed to this due to the very short rectum in this species (Percy and Barthold, 2007; Uchihashi et al., 2015). However, there are very few reports of rectal prolapse in hamster (Renshaw et al., 1975).

2. Case History and Diagnosis

A hamster was brought to the clinic with the history of mass protruding from the rectum since four days. A probe was passed from the side of the prolapsed mass to differentially diagnose it from intussusception and the case was diagnosed as a case of rectal prolapse (Fig 1). To distinguish rectal prolapse from protruding intussusception, the area around the protruding tissue should be palpated; the existence of a fornix indicates rectal prolapse rather than intussusceptions (Radlinsky, 2013).

![Fig 1: Hamster with the prolapsed rectal mass.](image1)

3. Treatment

As hamsters are aggressive by nature and may bite, the animal was first given general anaesthesia. Xylazine at 10 mg/kg and Ketamine at 100 mg/kg was administered through intraperitoneal route (Flecknell et al., 2007). For intraperitoneal route, injections are usually made into the left lower abdominal quadrant. Rodents are restrained in dorsal recumbency, as shown in (Fig 2). Most of the commercially available analgesic and anaesthetic agents are available in high concentrations, so that only very small volumes would be required for injection in small rodents. Precise dosing is easier if insulin/tuberculin syringes are used. The prolapsed mass was cleaned with normal saline. It was lubricated with lignocaine jelly and slowly pushed inside. This was followed by application of purse string sutures using absorbable suture material (Fig 3).

![Fig 2: Administration of anaesthesia through intraperitoneal route.](image2)

4. Results and Discussion

Long-term complications of untreated rectal prolapse are trauma to the prolapsed tissue, ulceration and necrosis of the tissue, secondary bacterial infections and systemic signs of illness (Rogala et al.,...
2014), thereby warranting an early intervention. However, no such complication was observed in present case and the prolapsed mass was healthy and thus it was decided to reposition the prolapsed mass.

Fig 3: Purse string suture applied after reduction of prolapsed mass.

For induction of anaesthesia, single dose of xylazine-ketamine by intraperitoneal route was given which proved sufficient for the procedure and no increment dose of anaesthesia was given. Purse string sutures were applied using absorbable suture material. Uchihashi et al. (2015) also used absorbable suture material for retention of prolapsed mass in mice. The hamster recovered from uneventfully from anaesthesia and was handed over to owner.

Post operatively, lack of defecation and mutilation of the surgical site are the reported complications associated with this procedure (Uchihashi et al., 2015). However, in the present case, purse string sutures were not disrupted and there was no evidence of reprolapse or any other complication.

5. Conclusion

Surgical management of rectal prolapse in a hamster was performed under xylazine-ketamine anaesthesia.

References


