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Surgical management of evisceration of intestines due to dog bite in a mongoose (*Herpestes auropunctatus*)

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Abstract

Trauma to the small intestine is uncommon. Intestinal and mesenteric injury occurs commonly with penetrating abdominal wounds and blunt abdominal trauma or may occur with bite wounds of the abdomen. In present case, a mongoose was presented with teared skin, muscle and peritoneum of ventral region and evisceration of intestine due to dog bite. Clinical examination revealed as reddish, painful and echymotic skin around the eviscerated organ without any perforation in the intestines. Emergency surgical management was done by restraining the animal using proper anaesthetic protocol with proper post-operative management and the recovery was uneventful.

Keywords: Anaesthetics, evisceration, intestine, mongoose, suture

Introduction

Abdominal evisceration is defined as herniation of the contents of the peritoneal cavity through the body wall with exposure of the abdominal viscera (Cigdem *et al.*, 2006) [2]. Abdominal evisceration injuries could lead to devastating injuries (Gower *et al.*, 2009) [3]. Trauma to the small intestine is uncommon. Intestinal and mesenteric injury occurs commonly with penetrating abdominal wounds and blunt abdominal trauma (Bojrab, 1983) [1] or may occur with bite wounds of the abdomen (Slatter, 2003) [4]. The present paper places on record a successful surgical management of evisceration of intestinal loop through dog bite wound.

Case history and clinical observation

A mongoose (*Herpestes auropunctatus*) was presented to Dept. of Surgery with the history of dog bite before 1hour. The site was thoroughly examined and revealed as teared skin, muscle and peritoneum of ventral region and evisceration of around 50 percent of intestinal loop. On clinical examination, reddish, painful and echymotic skin around the eviscerated organ without any perforation in the intestines were noticed. The animal showed dyspnoea and restlessness with normal temperature and heart rate. Emergency surgical intervention was carried out to save the life of the animal.

Surgical procedure

The animal was restrained with a mixture of xylazine (1mg/kg b. wt.), ketamine (20mg/kg b. wt.) and atropine sulphate (0.04mg/kg b. wt.). Then the exposed soiled area was thoroughly cleaned with cotton soaked with normal saline. The torn area of the skin was prepared aseptically and the wound was extended on both the sides to reduce the intestinal mass into the abdominal cavity. The mass was examined thoroughly for any perforation, contamination and viability. Contaminated intestinal loops were lavaged with metronidazole to remove the foreign materials. Then the intestinal loops were repositioned and reduced into the abdominal cavity. Following correction of the intestines, the peritoneum and abdominal muscles were closed using chromic catgut No.1 with Horizontal mattress reinforced with simple continuous suturing pattern and the skin was opposed with simple interrupted suturing pattern using nylon.

Treatment

Post-operatively the animal was treated with Inj. Ceftriaxone@12.5mg once daily for 5 days, Inj. Meloxicam @ 0.3mg/kg b.wt. intra muscularly for 3 days and antiseptic dressing of surgical wound by povidone iodine ointment for 10-15days. Skin sutures were removed on 10th post surgical day and the animal showed uneventful recovery.

Discussion

Prognosis of evisceration depends on severity of trauma, location, organ exposed, bleeding, contamination, stabilization, strangulation, administration of antibiotics and early surgical intervention. Proper surgical technique and postoperative care minimizes the complications (Bojrab, 1983) [1]. Early stabilization and surgical intervention might increase the survivability of the animals with less or no postoperative morbidity (Gower *et al.*, 2009) [3]. The decision of closing the abdominal wall and superficial tissue depends on the amount and location of tissue damage and wound contamination. Primary repair should be appropriate for those animals with acute evisceration. Since the animal had minimal intra peritoneal but significant superficial tissue damage, routine abdominal wall closure was done in present. Deep severely contaminated wounds should best managed by open peritoneal drainage techniques (Woolfson, 1986) [5].



Fig 1: Showing eviscerated intestinal loops



Fig 2: Showing lavaged by metronidazole



Fig 3: Showing reposition into abdominal cavity

Conclusion

Exposed organ may quickly get contaminated and damage resulted in shock by fluid and blood loss. In the present case the tissue damage was minimal with less contamination. So routine abdominal closure was done with best possible postoperative care. Usually the Dog bite wound could not be closed completely but in this case considering the viability of the eviscerated mass and even wound margin, the skin was closed completely. This procedure also prevents further contamination and infection to the intestine.

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