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Intussusception in a Jersey crossbred pregnant heifer

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Abstract

A four year old female jersey crossbred heifer pregnant about 7 to 8 months, weighing 321 kg was presented with the anamnesis of anorexia, colic signs, absence of rumination and complete cessation of defecation since 3 days. Based on the clinical and ultrasonographic examination the case was tentatively diagnosed as intestinal obstruction. Right flank exploratory laparotomy was performed under general anaesthesia and confirmed as intussusception. Enterectomy and end-end enteroanastomosis was performed as per the standard procedure. Post operatively the animal was maintained with intravenous fluids and antibiotic, analgesics and supportive therapy for three days. The cow passed dung 12 hours after surgery and recovered uneventfully.

Keywords: Intussusception, enterectomy, end-end enteroanastomosis

Introduction

Intussusception is the invagination or telescoping of a portion of the intestine (intussusceptum) into the lumen of the adjacent bowel (intussusciens). The most common locations of intussusception were the small intestine (84%), colocolic (11%), and ileocolic (84%). No sex or seasonal predilection for developing intussusceptions was documented (Fubini and Ducharme, 2016) [3]. The etiology may be abnormal peristalsis, vigorous bowel movements due to inflammation or drinking of cold water, abscess or polyps involving intestinal lumen (Tyagi and Singh, 1994) [2]. This condition must be treated earlier because obstruction of intestine causes dehydration, hypovolemia, metabolic alkalosis, and pre renal azotemia. Untreated cases usually die 5 to 8 days after the onset of clinical signs (Fubini and Ducharme, 2016) [3]. Right flank laparotomy under general anaesthesia founds suitable for surgical correction of intussusception in cattle (Vigneshwaran, *et al* 2019) [4]. The surgical management of intussusception under general anaesthesia in a jersey crossbred pregnant heifer is discussed.

Case history and observations

A four-year-old female jersey crossbred heifer pregnant about 7 to 8 months, weighing 321 kg was presented with the anamnesis of colic signs, the absence of rumination, anorexia and complete cessation of defecation since 3 days. Clinical examination revealed that all the physiological parameters were found to be normal except elevated heart rate. Rumen consistency was resilient with one rumen contractions per five minutes. Rectal examination revealed empty rectum, distended intestinal loops with sausage shaped intestinal mass at right upper quadrant and tarry colour mucous was found to be smeared over gloves. Ultrasonographic examination revealed distended intestinal loops. Based on the clinical and ultrasonographic examination it was tentatively diagnosed as intestinal intussusception and decided to perform the exploratory laparotomy. Preoperatively all the haematological parameters were found to be within the normal limits.

Treatment

Preoperatively the animal was administered with intravenous fluids and antibiotics. The right flank was prepared aseptically for the surgery. Flunixin at the rate of 1.1 mg per kg body weight was administered preoperatively for pain management. The animal was premedicated with dexmedetomidine at the dose rate of 1 mcg per kg body weight intravenously. After five minutes double drip solution containing guaifenesin at the dose rate of 50 mg per kg body weight ketamine at the dose rate of 2 mg per kg body weight were administered intravenously and the same anaesthetic protocol followed by Vigneshwaran, *et al* (2019) [4] also. Oro-endotracheal intubation was done with cuffed endotracheal tube.

Anaesthetic maintenance was done with 2% Isoflurane with Mallard Medical Large Animal Anaesthetic machine. A 20 cm linear skin incision was made and muscles were incised in decreasing indent to avoid dead space formation. Omental covering was pulled anteriorly to explore the intestine. The affected part was exteriorized to the incision site after application of laparotomy pads. Enterectomy was performed after the application crushing and non-crushing forceps and ligation of arcading blood vessels in the mesentery supplying to the affected part. End-End enteroanastomosis was achieved by simple interrupted suture pattern using polyglactin 910 (No-1) and the similar procedure was reported by Vigneshwaran, *et al* 2019^[4]. Post operatively the animal was maintained with intravenous fluids for four days, antibiotic and analgesic therapy for 7 days. Feed and water was slowly introduced from third day onwards. The surgical wound was dressed daily up to 10 days. The cow passed dung 12 hours after surgery and resumed feeding from 4th post-operative day onwards. Proper fluid therapy, selection of suitable anaesthetic protocol and wound care made animal uneventful recovery.

Summary

Successful surgical management of intussusception in a jersey crossbred pregnant heifer under general anaesthesia was reported. In this present case general anaesthesia provides better pain management, good quality surgical environment and speedy recovery.

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