



E-ISSN: 2320-7078

P-ISSN: 2349-6800

www.entomoljournal.com

JEZS 2022; 10(2): 115-117

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Received: 03-01-2022

Accepted: 06-02-2022

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Intussusception resemble to rectal prolapse and its surgical management in cats: Report of two cases

Deny JennesDOI: <https://doi.org/10.22271/j.ento.2022.v10.i2b.8976>**Abstract**

Two cats were presented to Teaching Veterinary Clinical Complex, Mannuthy with a complaint of rectal prolapse from the past two days. The presented animals were weak and emaciated. A small sausage shaped structure could be palpated on abdominal palpation, and the animal exhibited pain on palpation. Due to the oedema of the prolapsed mass, it could not be reduced to a normal position. The ultrasonographic examination of the abdomen produced a target sign suggestive that the condition was intussusception. I decided to correct the condition surgically. Opened the abdominal cavity through the *Linea alba* and exteriorized the affected portion from the remaining segments. Manually reduced the affected portion under general anaesthesia. Closed the abdominal cavity and skin incision as per the standard manner. Animals were exhibited successful recovery.

Keywords: Cat, ileo-caeco-colic intussusception, target sign, ultrasonography**Introduction**

Intussusception is the invagination of a portion of the intestine called the intussusceptum into the lumen of an adjacent segment called intussusciens (Lewis and Ellison, 1987) [5]. Classification of intussusception based on the location includes entero-colic (ileocolic), caeco-colic, entero-enteric, duodeno-gastric and gastroesophageal. Also classified as high (proximal to the jejunum) and low (distal to the duodenum) intussusception (Dixon, 2004) [3]. Diagnosis of the intussusception can be made by using abdominal palpation, radiography, ultrasonography and computed tomography (Patsikas *et al.*, 2019) [7]. In this case report abdominal palpation and ultrasonography were used to make the confirmatory diagnosis. Free passage of the probe through the protruded mass and the rectum helped to differentiate the condition from rectal prolapse.

Materials and Methods

Two cats were presented to Teaching Veterinary Clinical Complex, Mannuthy with complaints of a prolapsed mass through the anus and diarrhoea from the past two days. In Case I the cat was one –a month old female weighing 0.7 kg and in Case II the animal was 21 days old female weighing 0.2 kg. Both animals were weak and emaciated. Stabilized the animal with subcutaneous fluids and antibiotics. Peripheral veins were not get for haematologic analysis. The physiologic temperature was subnormal in both animals and showed rapid shallow respiration with a weak pulse. The protruded mass undergoes some colour change and is totally contaminated. For differentiating the rectal prolapse and intussusception, passed a thermometer between the prolapsed mass and anus. The free passage of the thermometer suggested that the condition was not a rectal prolapse. On abdominal palpation felt a small tubular structure in the abdominal cavity. After a thorough cleaning with normal saline, the mass was tried to reduce manually. Due to severe oedema the manual reduction was failed. Ultrasonography of the lateral abdomen revealed a target sign and confirmed the condition was intussusception. The faecal sample analysis of both animals was negative for any parasitic ova of clinical importance. For the reduction of the oedema of prolapsed mass applied the solution of magnesium sulphate to the mass through a wet gauze pad for fifteen minutes. Due to considering the emergency of the condition decided to managed it surgically.

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Fig 1: Case 1 – Prolapsed part of intussusception



Fig 2: Case 2 Protruded mass



Fig 3: Case 1 - Target sign



Fig 4: Case 2 – Target sign

Treatment and Discussion

Prepared the ventral abdomen from umbilicus to pubis for aseptic surgery. Thoroughly cleaned the prolapsed mass using

sterile normal saline. Anaesthetised the animal with inj. ketamine 20 mg/kg body weight and inj. midazolam at the rate of 0.1 mg/kg body weight in the intramuscular route. Maintained the anaesthesia with isoflurane 0.5% – 1% using a face mask.

Positioned the animal in dorsal recumbency and made a linear incision through the linea alba. I opened the abdominal cavity and isolated the intussuscepted portion of the intestine. Gently applied traction from the inner segment to repositioned the prolapsed mass. Gently milked out the intussusceptum from the intussusciens. The region of the intussusceptum was the ileo-caeco-colic junction in both cases. The affected portions were not necrosed and mesenteric blood vessels appeared as normal. So only manual reduction was required for reducing the condition. Lavaged the abdominal cavity with sterile normal saline. Returned the intestinal loops into the abdominal cavity. Closed the abdominal cavity by simple continuous suture pattern using polyglactin 910 size 2-0. Apposed the skin incision by horizontal mattress suture pattern using fine nylon.



Fig 5: Intraoperative image of telescoped segment



Fig 6: Milked out the intussusceptum

Postoperatively the animal was treated with intravenous fluid therapy, inj. ceftriaxone at the rate of 20 mg/kg body weight through the intramuscular route for seven days, inj. meloxicam at the rate of 0.2 mg/kg body weight intramuscular route for three days and with B complex vitamins. Gradually introduced semisolid and easily digestible food materials into the diet of the animal. The animal recovered successfully after the tenth postoperative day.

Clinical signs exhibited by the affected animals include vomiting, anorexia, tenesmus, bloody mucoid diarrhoea with palpable abdominal mass (Cina *et al.*, 2009) ^[1]. The most common site for the occurrence of this condition in cats is the

ileocolic junction (Levitt and Bauer, 1992)^[4]. In severe cases the intussusception can progress and the small intestine protrudes through the anus. In this point we can able to differentiate the condition from rectal prolapse by the easy passage of a blunt probe between the prolapsed segment and the rectum (Orshner and Rosin, 1993)^[6]. In this present case report this method was used to differentiate the condition. Among the diagnostic methods ultrasonography is the most popular diagnostic tool in the veterinary field with more accuracy and in ultrasonography the intussusception in the transverse plane will appear as a series of concentric rings giving a characteristic Target like or Bull's eye appearance (Lamb and Mantis, 1998)^[3]. The invagination of the intestinal segment commonly occurs in a normograde direction and rarely in the retrograde manner (Rallis *et al.*, 2000)^[8].

Summary

In summary the present case report give an idea for the differential diagnosis of rectal prolapse and intussusception. The correct diagnosis of the patient condition is very much important for the proper treatment.

Acknowledgement

Author thankful to the department of veterinary surgery and radiology for providing the required facilities for the completion of the case.

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