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Popular Article

## Successful surgical management of intussusception at ILEO- CAECO-COLIC JUNCTION in a German shepherd puppy

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Intussusception is a common surgical disorder in dogs and cats commonly observed in puppies < 1 year of age and in adult intussusception is a rare condition. A 4-month-old intact male German shepherd dog was presented to Veterinary Clinical Complex, Kumarganj, Ayodhya with a history of anorexia, frequent vomition, diarrhoea and anal prolapse during straining from last one week. Symptomatic treatment for gastroenteritis was given by local vet but no response observed. Abdominal palpation revealed a relatively sausage shaped and tender mass in caudal abdomen. Plain radiographs have shown area of reduced serosal detail, gas accumulation at proximal to the obstruction site and of increased soft tissue density in the left of mid abdomen. The clinical history and physical examination were suggestive of intestinal intussusception. The intussusception was found at ileo-caeco-colic junction on laparotomy. Correction was done with by manual reduction or squeezing, Mild tear of muscularis layer was sutured with catgut 2-0 and entroplication was done.

**Key words:** Intussusception, radiograph, ultrasonography, hyperechoic, hypoechoic, ileocolic

### Introduction-

Intussusception is defined as a prolapse or invagination of one portion of the intestinal tract into the lumen of an adjoining segment. The components of an intussusception include the invaginated intussusceptum, and the enveloping segment intussuscepien (Allenspach 2010). Most common sites of intussusception are enterocolic intussusception, and particularly ileocolic intussusception. Vomition, bloody diarrhoea; abdominal pain and emaciation are common clinical signs. Diagnosis is usually by combination of history, physical examination and use of imaging techniques like plain and contrast radiography and ultrasonography (Paryani, 2013). The present case report describes the successful



surgical management of intussusception in four-month German shepherd dog.

### Case History and observations-

A Four-month-old German shepherd dog was presented to Department of Veterinary Clinical College of veterinary science and Animal Husbandry, ANDUAT, kumarganj with the history of inappetance, vomition and bloody diarrhoea with frequent anal prolapse in the last five days. Initially the pet was treated with antiparasitic, antibiotics, and antiemetic drugs in private clinic but no improvement was seen. Dog was dull at the time of presentation. Physiological examination revealed that the dog was pyretic, respiratory rate, heart rate and capillary refill time were within the normal range. A relatively sausage shaped tender mass was located in caudal abdomen during the abdominal palpation (Fig.1). The dog was referred to radiographic examination. Normal radiograph of abdomen revealed coiled spring appearance of the terminal part of the small intestine (Fig.2). The history, clinical and radiological findings were suggestive of intestinal intussusception and mid ventral laparotomy was planned.



Fig.1



Fig.2

### Surgical treatment

The ventral midline was prepared aseptically for surgery. Atropine sulphate and Xylazine @ 0.02 mg / kg and @ 1mg / kg body weight respectively was given intramuscularly as preanesthetic. As an analgesic, Butrophanol @ 0.2 mg / kg body weight was given intravenously. Anesthesia was induced with ketamine @ 2.5 mg / kg and maintained with ketamine and diazepam topup mixture. Exploratory laparotomy confirmed intussusception at ileo-caeco-colic junction (Fig. 3). The intussusception reduced manually and the intestinal segment was viable. Mild tear of intestinal segment was corrected by catgut 2-0 in simple continuous pattern and entroplication was done to prevent reoccurrence. Linea alba was closed in simple interrupted suture pattern using Polyglactin 910 No.1-0 suture material. Subcutaneous tissue was closed in simple continuous suture pattern. The skin edges were closed by cross mattress pattern using silk No. 1-0 suture material. Post-operatively, Ceftriaxon-tazobactam @ 20 mg / kg bid body weight was administered intravenously for 5 days. Meloxicam @ 0.2 mg / kg body weight was administered daily once for three days subcutaneously. Animal was given only intravenous fluids for



three days followed by liquid diet. Skin sutures were removed on 10<sup>th</sup> post-operative day. Animal shown an uneventful recovery.



After Recovery

## Discussion

Intestinal intussusceptions are common in dogs and cats. It is more prevalent in German shepherd dogs (Lewis and Ellison, 1987; Oakes et al., 1994; Dixon, 2004). The age of dog reported in the present case was 4 month, and 80% cases of intestinal intussusception have been reported in pups less than one year of age (Dixon, 2004). The case under discussion showed a complaint of less frequent vomiting and bloody diarrhoea that are typical signs of ileocolic intussusception (Lewis and Ellison, 1987). Intestinal intussusception has varied etiologies such as intestinal parasitism, enteritis, linear foreign bodies, and prior abdominal surgery (Wilson and Burt, 1974). Intestinal intussusception is mostly found to be associated with enteritis (Wilson and Burt, 1974 and Ellison, 1986); as was the case with the dog under report, besides that no other clinical findings were identified. In older animals it is found to be associated with neoplasia of intestines (Oakes et al., 1994). Abdominal radiography and ultrasonographic studies may be diagnostic. Ultrasonography is an accurate diagnostic method that has totally replaced conventional radiology in the diagnosis of intestinal intussusception (Goyal et al., 2010). A cylindrical intestinal mass with a characteristic "ring sign" on ultrasonography is highly specific for intussusception. Intussusception was reduced manually and this technique succeeded due to the vitalized tissue, so resection and end-to-end anastomosis not performed which is considered as a viable treatment of intestinal. Early recognition of an intussusception, aggressive fluid therapy, and



prompt surgical correction should result in better survival rates in future (Levitt and Bauer 1992).

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