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Acute Ileo-colic intussusception in a pup with parvoviral infection

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Abstract

Intussusception is the invagination of one part of intestine into the adjacent part and is normally an uncommon affection of dogs of all ages. But in dogs especially in puppies with gastro-enteritis the occurrence is higher. Parvo viral infection in young dogs cause severe enteritis and become a predisposing factor for intussusceptions. A German Shepherd puppy with Parvo viral infection suffered from ileocolic intussusceptions. The pup was treated surgically for the intussusceptions and recovered completely.

Keywords: puppies, Parvo, intussusceptions, enteritis

Introduction

Intussusception is defined as a prolapse or invagination of one portion of the gastrointestinal tract into the lumen of an adjoining segment [1, 2]. Intussusception is an uncommon but potentially life threatening condition that can occur in dogs of all ages. Puppies are the most likely ones to develop intussusceptions especially due to Parvo viral enteritis and parasitic enteritis. Enterocolic intussusception, particularly ileocolic intussusceptions are the most common type described [9]. Treatment options are almost exclusively surgical.

In this report, one case of ileocolic intussusception, in a German shepherd pup of 2 months of age, showing positive test for Parvoviral infection with protrusion of the intestine from the rectum is described.

Case description

A 2 month-old, male, German shepherd pup was presented with a cylindrical mass hanging from the anus. The protruding part was a red cylindrical mass and it was devoid of any visible injury but swelling was noticed. It was confirmed as intussusception by passing the thermometer through the gap between the anal sphincter and the cylindrical mass. There was bloody watery stool, fever (103-104°F), vomiting with foul smelling vomitus, weakness, dehydration, anemia, and the animal was dull and depressed. It showed positive result in the spot test for parvo virus infection seven days before and it was undergoing treatment.



The initial Haemoglobin level was 8.9 g/dL. The pup was treated with Ringer's Lactate, DNS, Pantoprazole, Ondesteron, Botropase, Vitamine-B₁, B₆, B₁₂ injection twice daily for the viral infection for last 7 days. The owner was advised to stop oral feeding completely. The pup responded to the treatment and was recovering from the viral infection gradually. On the eighth day owner presented the puppy to us for the hanging mass on the anus.

The vital parameters (temperature, heart rate, respiration rate, pulse rate etc.) were checked and were found to be within their normal range. The animal was slightly anaemic as the cutaneous mucous membranes were slightly pale but the CRT (Capillary Refill Time) was less than 2 seconds.

Results and discussion

The puppy was immediately prepared for emergency surgery to reduce the invaginated part of the intestine.

The protruded part was washed with normal saline solution and then antibiotic mixed normal saline solution. The animal was premedicated with Atropine Sulphate @ 0.04 mg/kg body weight. Cefotaxim and Tramadol were administered preoperatively through intravenous route. Anaesthesia was induced and maintained by giving propofol intravenously and intubated with no.5 endotracheal tube.

Ceiliotomy was done by ventral midline approach and affected part exposed. The intussusception was reduced by applying gentle traction on the neck of the intussusceptum and milking the intussuscepian out of it along with gentle push on the protruded part of the intestine from outside. On careful examination no adhesion, perforation or other visible lesions were seen on the intussusceptum. The teared mesenteric part was ligated and brought closure. The intestine was washed with metronidazole and replaced inside the peritoneal cavity. The abdominal cavity was closed in routine manner.

Post-operatively the pup was kept under fluid therapy for 48 hours postoperatively. Antibiotic (Cefotaxim) was administered 12 hourly for 5 days and Tramadol was administered 6 hourly for the first 24 hours and then 12 hourly for the next 48 hour. From third day liquid diet was given for three days and gradually the pup was shifted to solid diet. The pup recovered uneventfully.



Most commonly intussusceptions are associated with some problem that causes inflammation of the intestine (enteritis). There is a relationship between inflammatory bowel disease and intussusception in dogs [5]. It has been reported that acute enteritis or gastroenteritis predisposes to intussusception by inducing alterations in the intestinal motility, but the involvement of inflammatory bowel disease is unclear [6]. The exact cause of intussusceptions, in general, is unknown; however, any lesion in the bowel wall or irritant in the lumen that alters the normal peristaltic pattern may initiate invagination [7].

Parvoviral infection cause severe enteritis and therefore post Parvoviral intussusceptions are more common in young dogs [3]. The German shepherd breed is more susceptible to the post Parvoviral intussusceptions [4]. Intussusceptions occur primarily in dogs younger than one year of age and are most

commonly found at the ileocolic junction (8) and in this case both the condition were reported.

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