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Emergency surgical intervention for intussusception with preventive enteroplication in a Labrador puppy recovered from parvoviral enteritis

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Abstract

A two-month-old female Labrador puppy weighing 3.5 kg presented with acute onset anorexia, vomiting, and hematochezia of two days duration was evaluated at the Department of Veterinary Surgery and Radiology, Veterinary College, Hebbal, Bengaluru. Clinical and laboratory findings supported a diagnosis of canine parvoviral enteritis, for which the patient received intensive supportive therapy over seven days. Although marked clinical improvement was noted, abdominal palpation on day seven revealed a firm, elongated, sausage-shaped mass in the mid-abdomen. Ultrasonography demonstrated a characteristic “target” or “bull’s-eye” appearance, confirming intestinal intussusception. Emergency exploratory laparotomy identified a jejuno-jejunal intussusception, which was manually reduced. In view of the underlying enteric pathology and high recurrence risk, prophylactic enteroplication was performed. Postoperative recovery was uneventful, with progressive return to normal gastrointestinal function. This case underscores the importance of early diagnostic imaging in post-parvoviral patients and demonstrates the efficacy of enteroplication as a preventive surgical measure in managing juvenile intussusception.

Keywords: Enteroplication, intussusception, parvoviral enteritis, puppy, exploratory laparotomy

1. Introduction

Intussusception is a pathological condition in which a segment of the intestine (intussusceptum) telescopes into the lumen of an adjacent distal segment (intussusciens), leading to luminal obstruction and compromised blood flow (Birchard and Sherding, 2006) ^[1]. It can occur anywhere along the gastrointestinal tract, although jejunojejunal and ileocolic intussusceptions are most frequently observed in small animals (Burk and Ackerman, 2002) ^[3]. This condition is predominantly seen in animals younger than one year of age and is often associated with gastrointestinal hypermotility triggered by various factors such as enteritis, parasitic infestation, abrupt dietary changes, foreign bodies, and viral or bacterial infections (Boag *et al.*, 2005; Jergens, 2006) ^[2, 8]. Among these, canine parvoviral enteritis is a significant predisposing factor in puppies due to its mucosal damage and motility disturbances (Mansfield, 2010) ^[9]. Although more prevalent in younger animals, intussusception is also reported in adult patients, where it is commonly linked to neoplastic conditions or localized intestinal masses (Fossum, 2019) ^[5]. Postpartum intussusception has been described in queens, typically within eight weeks of parturition, likely due to hormonal fluctuations and changes in gastrointestinal tone (Nelson and Couto, 2014) ^[11]. Surgical correction remains the primary treatment, often performed via exploratory laparotomy. Manual reduction or resection and anastomosis may be required depending on the viability of the intestine. Enteroplication, which involves serosal apposition of adjacent intestinal loops, is frequently employed in high-risk patients to prevent recurrence (Ellison, 2004) ^[4]. Enteroenteropexy, or bowel plication, is performed to prevent recurrence of intussusception. The small intestine from the duodenocolic ligament to the ileocolic junction is sutured to decrease the potential for intestinal strangulation (Fossum, 2019) ^[5].

Materials and Methods

A two-month-old female Labrador puppy weighing 3.5 kg presented with acute onset anorexia, vomiting, and hematochezia of two days duration was evaluated at the Department of Veterinary Surgery and Radiology, Veterinary College, Hebbal, Bengaluru. Clinical and laboratory findings supported a diagnosis of canine parvoviral enteritis, for which the patient received intensive supportive therapy over seven days. Although marked clinical improvement was noted, abdominal palpation on day seven revealed a firm, elongated, sausage-shaped mass in the mid-abdomen. Ultrasonography demonstrated a characteristic “target” or “bull’s-eye” appearance, confirming intestinal intussusception. Emergency exploratory laparotomy was performed and identified a jejuno-jejunal intussusception, which was manually reduced. In view of the underlying enteric pathology and high recurrence risk, prophylactic enteroplication was performed. Postoperative recovery was uneventful, with progressive return to normal gastrointestinal function. This case underscores the importance of early diagnostic imaging in post-parvoviral patients and demonstrates the efficacy of enteroplication as a preventive surgical measure in managing juvenile intussusception.

The animal was anesthetized using Zoletil® (tiletamine-zolazepam) at a dosage of 10 mg/kg body weight administered intramuscularly. The animal was premedicated with Ceftriaxone at a dose rate of 25 mg/kg IV as a prophylactic antibiotic, and meloxicam at 0.3 mg/kg IV was given for preemptive analgesia and anti-inflammatory support. The surgical site was aseptically prepared following standard protocols. The puppy was positioned in dorsal recumbency, and a midline celiotomy was performed to access the abdominal cavity. Upon exploratory laparotomy, a jejunojejunal intussusception was identified (Fig. 3). The involved intestinal loops were carefully exteriorized for evaluation. The mesenteric vasculature was found to be patent with no signs of vascular compromise or ischemia. No adhesions were noted at the site of intussusception, and hence, gentle manual reduction was performed. Manual reduction involved applying steady, controlled pressure on the intussusceptum while simultaneously milking it from the intussusciens (Fig. 4). Following successful reduction, the affected intestinal segments were thoroughly evaluated for viability. No signs of necrosis or devitalization were observed (Fig. 5). To prevent recurrence, an enteroplication procedure was performed (Fig. 6). Small intestinal loops were aligned in a gentle, serpentine arrangement from the distal duodenum to the distal ileum. The adjacent loops were secured to one another using simple interrupted sutures placed at intervals of 6-10 cm, engaging the submucosa, muscularis, and serosal layers. Polydioxanone (PDS) 3-0 suture material was used for the enteroplication. The abdominal wall was closed in routine fashion: the linea Alba and subcutaneous tissues were sutured in layers, and the skin was opposed using surgical staples. Postoperatively the puppy was maintained on intravenous fluid therapy for 3 days. Postoperative medications included Ceftriaxone @ 25 mg/kg IV BID and Metronidazole @ 15 mg/kg IV BID for five days to address potential secondary infections, and Meloxicam 0.3 mg/kg IV SID for 3 days as anti-inflammatory, antipyretic and analgesic agent. Nutritional management consisted of a liquid diet for the initial three days, followed by a semisolid diet for four days. The puppy exhibited an uneventful postoperative recovery (Fig. 7), with complete clinical resolution.



Fig 1: Pet on the day of presentation to the Department of VSR



Fig 2: Ultrasonography showing bulls eye appearance of intestine



Fig 3: Jejuno jejunal Intussusception

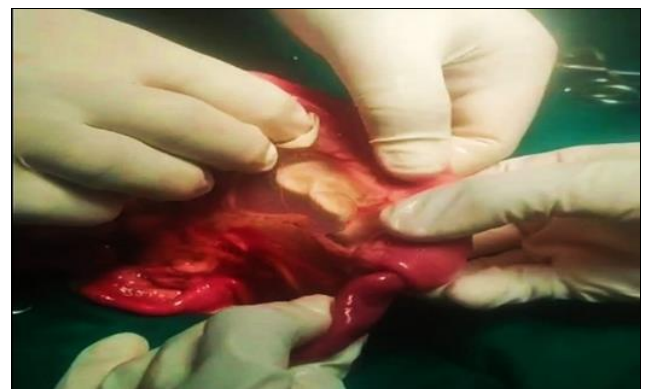


Fig 4: Manual reduction of intussusception by traction on intussusceptum and milking it from intussusciens



Fig 5: Normal intestinal segments



Fig 6: Enteroplication procedure using PDS 3-0 suture material



Fig 7: Pet after recovery

Discussion

Intussusception is a common cause of intestinal obstruction in young dogs, particularly in those recovering from gastrointestinal infections such as canine parvoviral enteritis (CPE). The hypermotility and inflammation associated with viral enteritis are considered predisposing factors for intussusception (Fossum, 2019) [5]. In the present case, a jejunojejunal intussusception occurred during the convalescent phase of parvoviral infection, consistent with the findings of Greenlee and Filippich (1995) [6], who reported a high incidence of intussusception following parvoviral enteritis in young dogs. Manual reduction is often possible in early cases where the bowel is viable and without significant adhesions (Fossum, 2019) [5]. In this case, the absence of ischemia or necrosis allowed for successful manual reduction without the need for resection and anastomosis.

Enteroplication is a surgical technique used to prevent recurrence by creating serosal adhesions between adjacent loops of the small intestine. It is particularly useful in cases where the risk of recurrence is high, such as those associated with enteric infections (Boag *et al.*, 2005) [2].

Although enteroplication is generally considered safe, complications such as obstruction, perforation, or impaired stabilizing motility have been reported (Ellison, 2004) [4]. In the current case, no such complications were encountered, and the animal recovered uneventfully, highlighting the efficacy and safety of the procedure when properly executed.

Ceftriaxone and metronidazole were selected to provide broad-spectrum antibacterial coverage during the postoperative period, especially considering the immunocompromised state post-parvoviral infection. Meloxicam was administered to reduce inflammation and pain, aligning with multimodal analgesia protocols recommended in small animal surgery (Mathews *et al.*, 2014) [10].

Early refeeding with a liquid diet, followed by gradual transition to semisolid food, was employed to support gastrointestinal healing and function, as per nutritional guidelines for post-GI surgery in small animals (Hand *et al.*, 2010) [7].

The outcome of this case underscores the importance of timely diagnosis and surgical intervention in managing intussusception secondary to parvoviral enteritis. Enteroplication remains a valuable prophylactic measure to prevent recurrence in such high-risk cases.

Conclusion

Jejunojejunal intussusception is a significant post-recovery complication in puppies following parvoviral enteritis, likely resulting from altered intestinal motility and mucosal inflammation. Early diagnosis and timely surgical intervention are critical to prevent bowel ischemia and necrosis. Manual reduction with prophylactic Enteroplication led to an uneventful recovery, demonstrating its value as a safe and effective preventive option for recurrent intussusception, especially in the post-parvoviral recovery phase.

Conflict of Interest

Not available

Financial Support

Not available

References

1. Birchard SJ, Sherding RG. Saunders manual of small animal practice. 3rd Ed. St. Louis: Elsevier; 2006. p. 822-824.
2. Boag AK, Coe RJ, Martinez TA, Hughes D. Intussusception in dogs and cats: a review of 200 cases. *Journal of Small Animal Practice*. 2005;46(11):531-536.
3. Burk RL, Ackerman N. Small animal radiology and ultrasonography. 2nd Ed. Philadelphia: Saunders; 2002. p. 250.
4. Ellison GW. Surgical diseases of the small intestine. In: Slatter D, editor. *Textbook of small animal surgery*. 3rd Ed. Vol. 2. Philadelphia: Saunders; 2004. p. 718-743.
5. Fossum TW. *Small animal surgery*. 5th Ed. Philadelphia: Elsevier Inc.; 2019. p. 458.
6. Greenlee PG, Filippich LJ. Intussusception in puppies with parvoviral enteritis. *Australian Veterinary Journal*.

- 1995;72(4):132-135.
7. Hand MS, Thatcher CD, Remillard RL, Roudebush P, Novotny BJ. Small animal clinical nutrition. 5th Ed. Mark Morris Institute; 2010. p. 807-809.
 8. Jergens AE. Diseases of the intestines. In: Birchard SJ, Sherding RG, editors. Saunders manual of small animal practice. 3rd Ed. St. Louis: Elsevier; 2006. p. 523-537.
 9. Mansfield CS. Acute and chronic intestinal diseases in dogs. Journal of Veterinary Emergency and Critical Care. 2010;20(2):162-174.
 10. Mathews KA, Kronen PW, Lascelles D, Nolan A, Robertson S, Steagall PV, *et al.* Guidelines for recognition, assessment and treatment of pain. Journal of Small Animal Practice. 2014;55(6):E10-E68.
 11. Nelson RW, Couto CG. Reproductive disorders of the queen. In: Small animal internal medicine. 5th Ed. St. Louis: Elsevier; 2014. p. 498-500.

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