

# SURGICAL MANAGEMENT OF INTESTINAL NON HODGKIN'S LYMPHOMA IN A DOG – A CASE REPORT

**Ramesh Rathod, L. Ranganath, A. S. Patil, B. N. Nagaraja and Sangeeta Jadhav**  
Department of Veterinary Surgery and Radiology, Veterinary College, Bangalore-24.

Small bowel lymphoma refers to a non-Hodgkin lymphoma that develops in the lymph tissue found in the small bowel. When small bowel lymphoma metastasizes, it often spreads to the mesenteric lymph nodes before extending to other organs in the body. Canine malignant lymphoma is one of the most common tumor and there are 2 anatomic forms of this disease that predominate in dogs: multicentric and alimentary. According to the reports, intestinal tumours are less than 10% in dogs of which lymphoma has been estimated at 29%, adenocarcinoma at 17%, leiomyosarcoma at 23% and small intestinal tumours over 1% (Moore and Vernau, 2000). Canine primary gastrointestinal lymphoma typically does not affect the superficial lymph nodes or the spleen, unlike the multicentric form in which these organs are almost always involved. The majority of canine gastrointestinal lymphomas appear to be primary, with most cases being reported in the small intestine and less case have been reported in the stomach; only a few cases have been in the colon (Coyle and Steinberg, 2004). Female Dogs aged over 10 years are more susceptible. Intestinal neoplasm shows similar symptom as of enteritis or obstruction which makes early diagnosis a difficult task. Present case reports surgical management of intestinal non hodgkins lymphoma in a two year old golden retriever dog.

## Case History and Observations

A two year old Female Golden Retriever dog was presented to the Veterinary College Hospital, Bangalore with a history of anorexia, vomition, diarrhoea, weight loss, dyschezia and melena since 15 days and not responding to the medical treatment given by a local Veterinarian. On physical examination animal had high fever, tachypnea and tachycardia. On abdominal palpation a hard mass was felt at Caudal abdomen. survey radiography of lateral abdomen revealed radiodense irregular mass which was further confirmed by barium study. Hematological parameters revealed Leukocytosis, characterized by neutrophilia and lymphopenia. It was decided for exploratory laparotomy.

## Treatment and discussion

Dog was prepared for aseptic surgery

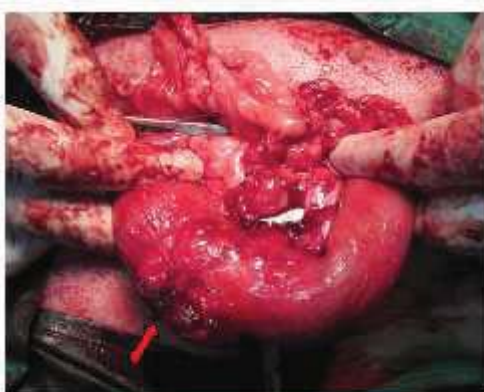


Fig-1. Intramural mass involving the colon

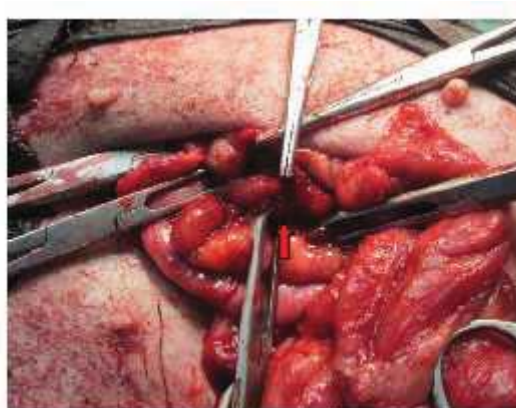


Fig-2. Enterectomy

and premedicated with Atropine sulphate @ 0.045 mg/kg body weight subcutaneous, pre-emptive analgesia with pentazocin @ 1 mg/kg intramuscular, sedation with triflupromazine Hcl @ 1 mg/kg intravenous. After 10 minutes, anaesthesia was induced with 2.5% thiopental intravenously and maintained under halothane oxygen mixture. Coeliotomy was performed and upon exploration, intramural mass occluding the lumen was found at ascending colon (Fig.1). Extent of the involvement was delineated and Enterectomy and Enteroanastomosis was accomplished (Fig.2). Abdomen was lavaged with warm normal saline followed by closing with No.1 polyglactin 910 (Vicryl No. 1 Johnson and Johnson, Aurangabad) in simple interrupted pattern, subcutaneous tissue and skin were approximated as per standard procedure.

The excised mass upon examination was hard with occlusion of intestinal lumen to the extent of 90%. The excised mass was preserved in neutral buffer solution and sent for histopathology which was confirmed as intestinal non hodgkin's lymphoma. Post-operatively, ceftriaxone (20mg/kg) was administered for 7 days systemically. The animal was maintained on parental alimentation of ringers lactate 250 ml and Dextrose 5%, 250 ml daily twice along with Metranidazole 100 ml intravenous for three days. Animal was started with liquid diet on 4<sup>th</sup> post-operative day and solids on 7<sup>th</sup> post-operative day. Skin sutures were removed on 10<sup>th</sup> post-operative day and Animal recovered uneventfully. There was no recurrence of symptoms in one year period of study.

Floeck *et al.*, (2008) reported that Small intestinal adenoma may be amenable to surgery, but death from metastatic disease occurs within one year. Paoloni *et al.*, (2002) reported ultrasonographic and clinicopathological findings in 21 dogs with intestinal adenoma and stated that most intestinal lesions were poorly echogenic and had an irregular lumen. Vezzali *et al.*, (2010) reported histopathological classification of 171

(123 dogs and 48 cats) cases of canine and feline non-hodgkins lymphoma.

## References

- Coyle, K. A. and Steinberg, H. 2004. Characterization of lymphocytes in canine gastrointestinal lymphoma. *Vet Pathol.* **41**:141–146.
- Floeck, M. Hoegler, S. and Krametter-Froetscher, R. (2008). *Veterinarni Medicina*, **53(4)**: 221–223.
- Moore, P. F. and Vernau, W. 2000. Lymphocytes: differentiation molecules in diagnosis and prognosis. In: Feldman BF, Zinkl JG, Jain NC, editors. *Schalm's Veterinary Hematology*. 5th ed. Philadelphia: Lippincott Williams & Wilkins. pp. 247–255.
- Paoloni, M. C. Penninck, D. G. and Moore, A. S. (2002). *Veterinary Radiology & Ultrasound* **43(6)**: 562-567
- Vezzali, E. Parodi, A. L., Marcato, P. S. and Bettini, G. 2010. Histopathologic Classification of 171 Cases of Canine and Feline non-Hodgkin Lymphoma According to the who. *Veterinary and comparative oncology*. **8(1)**: 38-39.

## Summary

An unusual case of intestinal non hodgkin's lymphoma in dog and its successful management is reported.

\*\*\*\*\*