

Colectomy by Rectal- Pull Through Technique for Colonic Tumor in Eight Years Old Dog

Siti Zaenab¹, Osye Alamsari¹, Eva Zulfiati¹, Tri Cahyo Dirgahariyawan¹

¹My Vets Animal Clinic Jakarta

*corresponding author

Corresponding email: myvets001@gmail.com

Keywords: colon, colonic tumor, colectomy, rectal-pull through.

INTRODUCTION

Dogs are one of those independent carnivores. However, dogs are also susceptible to digestion disease. In addition to diarrhea, obstruction or constipation, diseases that can also interfere with the digestive system are tumors of the digestive tract. Guyton, 2005).

Tumor or neoplasm disease is one of the most important medical problems for immediate treatment. The cause of tumor is very varied and very complex (Tjarta, 2002). Percentage incidence of tumor disease in animals, especially dogs is quite high. Until now, the prevention of tumor disease is generally done by surgery, radiation and chemotherapy.

CASE REPORT

Signalement, anamneses and clinical sign. Dog breed beagle, 8 years old with hematochezia since 2 weeks.

Laboratory examination. CBC, Comprehensive, X-ray.

Differential diagnose. Colonic tumor, colitis, helminthiasis and colon obstruction.

Diagnose and prognose. Diagnose from this case is colonic tumor and the prognosis is fausta.

Treatment. Treatment for this case is surgery with rectal pull through technique.

Tools and materials preparations:

Tools: commonly surgery tools (scaple, needle holder, scissors, arteri clamp, towel clamp, anatomy pinset, chirurgis pinset), inhalator, Endo Tracheal Tube (ETT) No 6.5, table, lamp, drapes, hand gloves.

Materials: alkohol 70%, steril gauze, NaCl, infus set, cefotaxime (IV), pethidine (SC), ketamine (IV), valium (IV), isofluran, metronidazole, poly glycoli acid suture 3.0, nylon monofilamen 3.0.

The rectal pull through technique was first performed by incision of the area around the anus to form a circle around the anus and then fixation of the rectum wall through the anus with stay suture.

To confirm, the incision of the rectal wall of

1.5 cm through the rectal distal and rectal cuff separated, continue separation of the rectal wall from the external anal sphincter and pull the colon and make a longitudinal incision. After 534utting part that contained the tumor and then place the cranial colon with rectal cuff with a simple interrupted suture (Fossum, 2002).



Figure 1. Left and right the technique of rectal pull through; under: post-operative

Post treatment. Management postoperative care and assessment is a very important part. Postoperative treatment performed on dogs was given Cefotaxime as antibiotics and metronidazole. Cefotaxime is a third generation cephalosporin antibiotic and is bactericidal. Cefotaxime is active against gram-negative bacteria such as: *E.coli*, *H.influenzae*, *Klebsiella sp*, *Proteus sp*, *Serratia sp*, *Neissarea sp*, and *Bacteroides sp*. The dosage according to BASAVA (2014) is 20-40 mg /Kg IV, IM, SC q8-12h. Metronidazole is a nitromidazole group of antibiotics by inhibiting protein in anaerobic bacterial DNA and bacteriocidal dose of metronidazole is 10 mg /Kg IV slow (BASAVA, 2014). Tramadol and anti-inflammatory treatment is dexamethasone given for 3 days. According to BASAVA (2014) the dose of tramadol in dogs is 2-5 mg /Kg and dexamethasone used 0.01-0.16 mg /Kg IM.

DISCUSSION

Tumors are one of five properties of inflammatory reactions. The tumor cells come from cells that were previously normal cells. (Berata, 2011). Physical examination is performed to determine the abnormal condition in the patient. The general condition of the dog is still good, but there is a narrowing of the colon after rectal palpation. Based on the physical examination performed, the dog is exposed to intestinal tumors in the colon because at the time of palpation in the large intestine area feels like a rough formation like cauliflower and fingers can not enter easily.

The laboratory examination showed x-ray examination in colon area was seen a mass caused more narrowed and obstructions colored by radio opaque, blood test date 26/12/2017 show of increased WBC and neutrophil this indicates an infection in the dog's body. Eosinophil was increased indicate the body's response to neoplasms, allergic reactions. Before surgery the dog must be infused using NaCl. This is to prevent hemorrhage and hypovolemia. Hypovolaemia may occur because of reduced intra vascular blood volume (Kline, 2002).

Antibiotics were given before surgery to prevent infection during the surgery. Antibiotics that was given is cefotaxim In this surgery isofluran anesthesia is used. The concentration of isofluran as induction can be given as much as 2 to 2.5% while for maintenance of 1.5 to 1.8% isoflurane concentration in oxygen (BASAVA, 2014).

According to Fossum et al. (2002), surgical techniques on the colon can be done in several ways, including dorsal approach, rectal pull through approach, ventral approach and anal approach. Dorsal approach is used when injuries enter the caudal or middle rectum and are not inside the anal canal. Ventral approach is used when the lesion is in the colorectal junction and requires pubic osteotomy. Anal approach is performed when there are small polyps on the rectal and caudal rectum or anal canals that can be exteriorized through the anus. The rectal pull through approach is performed when there is a foreign object or period in the distal part of the colon or at mid-rectal. The decrease in albumin is caused by protein loss caused by bleeding that occurs in dogs. Increased Alkaline phosphatase (ALP) may be due to the age of the dog

The rectal pull through technique was first performed by incision of the area around the anus to form a circle around the anus and then fixation of the rectum wall through the anus with stay suture. To confirm, the incision of the rectal wall of 1.5 cm through the rectal distal and rectal cuff separated continued separation of the rectal wall from the external anal sphincter and pull of the colon and incision colon with longitudinal incision. After cut the part that contained the tumor and

then place a cranial colon with rectal cuff with a simple interrupted (Fossum, 2002). Management postoperative care and assessment the wound healing stage should be monitored properly.

CONCLUSION

The conclusions in this case that dogs were diagnosed with tumors in the colon seen through x-ray results and also required other investigations such as blood tests and based on physical examination. An appropriate surgical technique that can be performed in the above case is by rectal pull - through approach. This technique is a surgical technique that can be done if there is a mass on the caudal colon. Before doing surgery, it is necessary to prepare the tools, materials, animals and the operators. Postoperative treatment in this case was achieved by giving antibiotics such as cefotaxime and metronidazole. Analgesics such as tramadol, anti-inflammatory like dexamethasone and some supportive therapies will help the postoperative healing. It is important after the surgery to monitor whether the animal can defecate normally or not and to ensure the wound is always clean and dry. Prevention can be done by maintaining the diet as well as the type of food provided and routine checks with the veterinarian.

REFERENCES

- [1] BASAVA. 2014. *BASAVA Small Animal Formulary 8th edition*. British Small Animal Veterinary Association.
- [2] Berata, I.K, I.B.O, Winaya, A.A.M., Adi, I.B.W, Adyana, I.M, Kardena. 2011. *Patologi Veteriner Umum*. Fakultas Kedokteran Hewan Udayana. Bali
- [3] Fossum TW. 2002. *Small Animal Surgery*. 2 edition. Mosby: Missouri.
- [4] Fossum, T.W. 2000. *Manual of Small Animal Surgery*. C.V. Mosby. St Louis
- [5] Guyton, A.C., dan J. E. Hall. 2005. *Buku Ajar Fisiologi Kedokteran*. Edisi ke-9. EGC. Jakarta.
- [6] Kemenkes RI. 2011. *Pedoman Intepretasi Data Klinik*. Jakarta
- [7] Tjarta A. 2002. Neoplasia. Di dalam: Pringgoutomo S, Himawan S, Tjarta A, editor. *Patologi 1 (Umum)*. Edisi ke-1. Jakarta: Sagung Seto.