Therapeutic Management of Ascites in a Saint Bernard Dog

Deepak Kumar Kashyap, Saraswat Sahoo,* Arpita Padhy and D. K. Giri

Teaching Veterinary Clinical Complex, Arawali Veterinary College, Bajor, Sikar, India - 332001

*Corresponding author: saraswat.vet06@gmail.com

Abstract

Five years old, Saint Bernard dog was presented to the Teaching Veterinary Clinical Complex with the complaint of inappetence and apple shaped abdomen. On percussion of the abdomen fluid thrill was felt. The case was diagnosed as ascites and successfully managed by abdominocentesis along with medicinal approach.

Key words: Ascites, Abdominocentesis, Therapeutic Management

Introduction

Ascites refers to the accumulation of serous fluid in the peritoneal cavity which is caused by a variety of etiological factors viz. chronic hepatic failure, congestive heart failure, nephritic syndrome, malnutrition, hypoproteinemia, protein losing enteropathy, heavy parasitism and abdominal neoplasia of different origin (Pradhan, et al., 2008 and Turkar et al., 2009). However, recent evidence contradicts these theories and suggests that renal mechanism leading to retention of sodium and water are primary events in development of ascites in hepatic diseases. Reduced albumin levels also contribute to onset of ascites (Richter 1996). In the present study, an attempt has been made to a bitch suffering from ascites using Liver tonics along with vitamins and minerals.

Case History and Observations

A five years old, Saint Bernard dog was reported to the Teaching Veterinary Clinical Complex, Arawali Veterinary College, Sikar, Rajasthan with the complain of inappetence and abdominal distension (Fig.1) along with dyspnoea and tachycardia. Clinical examination revealed normal rectal temperature, laboured respiration and tachycardia. Appearance of mucous membranes was pale in colour. On tapping the abdomen there was undulating movements (Thrills) of the fluid. Accordingly, the case was diagnosed as ascites and it was decided for medicinal management along with abdominocentesis.
Treatment and Discussion

Conventional Therapy
Paracentesis was done to remove extra fluid from the abdomen (Fig.2). Spironolactone tab 1 mg/kg/day in divided doses along with salt restriction. The supportive therapy in the form of B-complex (Polybion) 3ml/day, IM for one week and Liver tonics (Liv.52) bid, for 2 weeks was also given to improve the appetite.

Nutritional Supplements
Along with conventional therapy, Nutritional Supplements in the form of Threptin biscuits (protein rich biscuits) was also provided to improvement of normal health of the animal. Fluid and electrolyte therapy like 200ml of DNS (5%) and 150 ml RL were given intravenously, due to dehydration to replace the fluid and electrolyte deficit which occurred due to removal of ascitic fluid during abdominal paracentesis. Vitamin E was given as an anti-oxidant to remove free radicals and prevent further oxidative injury to the liver. A water-soluble form of vitamin E was preferred, since the absorption of fat-soluble vitamins might be decreased in some forms of liver disease mainly in case of hepatic origin. Vitamin K was also given to help in control of bleeding disorders, since a diseased liver produces and stores less of this vitamin which is necessary for the liver to produce clotting factors. Protein rich diet, with low copper and salt was given to prevent the recurrence and aggravation of the condition. Animals recovered uneventfully in a time period 21 days.

Ascites is caused by multiple etiological agents including chronic hepatic diseases. Disturbances in starling forces governing fluid movement across membranes, increased portal hydrostatic pressure caused by obstruction of venous flow, decreased plasma colloidal oncotic pressure associated with hypoalbuminemia, decreased lymphatic uptake, stimulation of Renin-angiotensin-aldosterone system due to
kidney damage, protein losing enteropathy may due to intestinal parasites (Chira et al., 2005) and ascites secondary to right side heart failure is very common in canines (Kruth, 2000). The collection of serous fluid within the peritoneal cavity and is a common complication in liver disorders. Two theories that have been proposed for formation of ascites are traditional theory / underfilling theory and overflow theory (Wyllie et. al., 1980). The efficacy of liver tonics, vitamins and minerals against ascites was cent percent. The recovery after treatment with diuretics, liver tonics along with supportive therapy like vitamins and minerals was faster and complete without any recurrence and other complications.

Summary

This paper describes about the successful management of ascites in a St. Bernard dog by both medicinal approach and abdominal centesis.

References