

Hypertrophic cardiomyopathy and their therapeutic management in a Lhasa apso dog

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Received: 11-03-2012, **Accepted:** 22-03-2012, **Published Online:** 23-05-2012

doi: 10.5455/vetworld.2012.493-494

Abstract

Case history and observation: A male, 3 years old Lhasa Apso dog was presented with the history of haematemesis, dehydration, exercise intolerance, poor appetite, lethargy, cough, seizures and syncope for more than 3 weeks. Lateral roentgenogram revealed enlarged heart. Based on radiographic examination alongwith history of seizures and syncope the condition was diagnosed as hypertrophic cardiomyopathy.

Treatment: The dog was treated with oral diltiazem @ 1.5 mg/kg body weight, ramipril @ 0.5 mg/kg body weight and frusemide @ 2 mg/kg body weight orally along with fluid therapy. Clinical improvement was noticed from third day. Improvement in appetite and physical activity with complete alleviation of clinical signs was observed by continued diltiazem (1.5 mg/kg, orally) and ramipril (0.5 mg/kg).

Result: It was reported that the dog continued to improve and became much brighter and active over next 25 days. Post treatment radiograph showed nearly normal size of the heart suggestive of clinical recovery.

Conclusion: Thus it is conclude that hypertrophic cardiomyopathy can be comfortably managed by medicinal therapy in canines.

Keywords: Hypertrophic Cardiomyopathy, Haematemesis, Seizures, Syncope.

To cite this article :

Kashyap DK, Tiwari SK, Dewangan G, Giri DK (2012) Hypertrophic cardiomyopathy and their therapeutic management in a Lhasa apso dog, *Vet World* 5(8):493-494. doi: 10.5455/vetworld.2012.493-494

Introduction

Hypertrophic cardiomyopathy (HCM) is an inappropriate myocardial hypertrophy of a non-dilated left ventricle, occurring in the absence of an identifiable stimulus for the hypertrophy. Suspected patients are presented with the signs of heart failure [1]. Hypertrophic cardiomyopathy is common in cats, less so in dogs. The left ventricular lumen appears reduced in size because of the marked thickening of the interventricular septum and left ventricular freewall. This thickening may be asymmetric but the left atrium is usually enlarged. Echogenic masses in the lumen may represent blood clots and the fractional shortening may be normal or increased [2]. The present study describes a typical case of hypertrophic cardiomyopathy and its therapeutic management in a Lhasa Apso dog.

Case History and Observation

A male, 3 years old Lhasa Apso dog was presented to the Department of Veterinary Surgery and Radiology, College of Veterinary Science and Animal Husbandry, Anjora, Durg, (C.G.) with the history of

haematemesis, dehydration, exercise intolerance, poor appetite, lethargy, cough, seizures and syncope for more than 3 weeks. Lateral roentgenogram revealed enlarged heart i.e. Cardiomegaly (Fig.1) and moderate pulmonary oedema. Based on radiographic examination alongwith history of seizures and syncope the condition was diagnosed as hypertrophic cardiomyopathy.

Treatment and Discussion

The dog was treated with oral diltiazem @ 1.5 mg/kg body weight, ramipril @ 0.5 mg/kg body weight and frusemide @ 2 mg/kg body weight orally along with fluid therapy. Clinical improvement was noticed from third day. The crackles and murmurs which had been auscultated were diminished in intensity, less frequent cough and bloody vomition and the amount of ascitic fluid was decreased by eighth day. Improvement in appetite and physical activity with complete alleviation of clinical signs was observed by continued diltiazem (1.5 mg/kg, orally) and ramipril (0.5 mg/kg). It was reported that the dog continued to improve and became much brighter and

active over next 25 days. Post treatment radiograph showed nearly normal size of the heart suggestive of clinical recovery. The treatment was done on similar lines as suggested by [3].

Marked cardiac muscle cell disorganization in the ventricular septum is characteristic of patients with hypertrophic cardiomyopathy [4]. Beta adrenergic and calcium channel blockers have been indicated in the treatment of the diastolic dysfunction of HCM as these drugs enhance ventricular relaxation and slows the heart [5]. In the present study improvement in clinical signs was seen after use of calcium channel blocker drug i.e. diltiazem and angiotensin converting enzyme inhibitor, ramipril was also added which triggered the rennin-aldosterone activation system [3]. Frusemide, a loop diuretic was also indicated to reduce fluid overload and resolve pulmonary oedema in hypertrophic cardiomyopathy dogs [1].

Thus it is conclude that hypertrophic cardiomyo-

pathy can be comfortably managed by medicinal therapy in canines.

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