

## Clinical Case of Congenital Heart Disease in a Pitt Bull from Camagüey, Cuba

Florangel Vidal F<sup>1</sup>, Iván Peña G<sup>1\*</sup>, Arnaldo del Toro R<sup>2</sup> and Aliesky Hernández R<sup>1</sup>

<sup>1</sup>University of Camagüey Ignacio Agramonte Loynaz, Cuba

<sup>2</sup>Faculty of Veterinary Medicine, Technical University of Manabí, Ecuador

**\*Corresponding Author:** Iván Peña G, University of Camagüey Ignacio Agramonte Loynaz, Cuba.

**Received:** February 20, 2021; **Published:** March 26, 2021

### Abstract

A female patient of the Pitt Bull breed is treated, five months old and weighing 5,145 kg, presenting as the main reason for consultation, syncope, during the interview an increase in respiratory frequency, intolerance to physical activity, mucous membranes cyanotic, on physical examination a strong systolic murmur under the left axilla is heard on chest auscultation, differentiating sub-aortic stenosis. The treatment achieved in a short time to stabilize the patient, reporting for hers the owner of hers the improvement of her having started it.

**Keywords:** PitBull; Subaortic Stenosis; Tricuspid Valve Dysplasia; Congenital Heart Disease

### Introduction

Aortic stenosis is one of the most common congenital heart diseases in dogs in many countries, representing between 22 and 35% of all congenital anomalies. Since the most common form is subvalvular, it is frequently referred to as subaortic stenosis [1].

Heart disease is the third most prevalent in our daily clinics, after skin and gastrointestinal problems. 80% of elderly dogs have heart problems, but they are not detected [2].

Literature data indicate that the incidence of congenital heart and large vessel malformations in dogs is 68% of the canine population, with different authors agreeing that the highest percentages (84%) correspond to the ductus arteriosus persistent, pulmonary stenosis and aortic stenosis, the rest of the defects (persistence of the right aortic arch, ventricular septal defect, tetralogy of Fallot, atrial septal defect, atrial ventricular valve malformation, among others, represent a lower percentage [3-5].

The review of the animal, clinical history, meticulous physical examination, diagnostic tests available under the conditions of Camagüey, Cuba, where diagnostic means such as electrocardiogram, chest radiographs and laboratory tests are not available, allow to guide the diagnosis of cardiovascular pathologies. It is considered that to make the definitive diagnosis the use of echocardiography (two-dimensional, M-mode and color Doppler) is necessary since it allows the diagnosis of most congenital heart diseases [4].

The diagnosis was made through a thorough physical examination and careful auscultation, seeking to detect small murmurs that were difficult to hear.

## Clinical Case

### October 2020

Sarah, a Pitt Bull patient, five months old and weighing 5,145 kg, has been presenting with syncope.

In the interview, the owner refers that she has presented sudden fainting spells or loss of consciousness, which occur in a short time, after this episode she joins up with total normality. When asked if the patient is active, she responds: that she refuses to play on many occasions, she remains most of the time at rest. She draws attention, her height and weight decreased, compared to other brothers in the litter, she is informed by her owner, that she was the last at birth and the smallest. She has hardly grown or gained weight.

On examination, mucous membranes are faint dark color, which constitutes cyanosis, due to the oxygen deficit.

Taking into account the race and age, it is suspected of:

1. Persistent arteriovenous ductus.
2. Subaortic stenosis.

On auscultation, a strong systolic murmur was detected under the left axilla, differentiating subaortic stenosis.

It is indicated to start treatment with: Enalapril, at a dose of 0.5 mg/kg orally, every 12 hours and furosemide at 1 mg/kg every 24 hours, according to Plumb [6], Mucha, personal communication (2020).

February 2021, a review of the patient is performed, showing a favorable clinical condition, no heart murmur was detected, the heart and respiratory rates are within normal parameters, the episodes of sudden unconsciousness disappeared, she has increased weight and his state of mind is very favorable, it was decided to keep the medication correcting the dose according to the current weight.

## Discussion of the Case

### Therapeutic principles on which the care was based

From a clinical point of view, the treatment of HF is approached based on: acute HF and chronic HF. In the case of acute, treatment focuses on preventing death from hypoxia, stabilizing the patient, leading him to chronic therapy. In patients with chronic HF, the goals include prolonging survival and minimizing symptoms.

In the treated cases, the signs and symptoms of the disease, found, suggest a subaortic stenosis [7,8].

Treatment was started with Enalapril, as it is an angiotensin converting enzyme inhibitor, for veterinary and human use, mainly used as a vasodilator in the treatment of heart failure or hypertension; It may also be beneficial in the treatment of chronic kidney failure or protein-losing kidney disease [6].

Literature data indicate that the incidence of congenital heart and large vessel malformations in dogs is 68% of the canine population, with different authors agreeing that the highest percentages (84%) correspond to the ductus arteriosus persistent, pulmonary stenosis and aortic stenosis, the rest of the defects (persistence of the right aortic arch, ventricular septal defect, tetralogy of Fallot, atrial septal defect, malformation of atrioventricular valves, among others represent a lower percentage [3-5].

Surgical correction is the ideal treatment, in most developing countries surgery is limited to the correction of patent ductus arteriosus, so the treatment of congenital heart diseases is restricted to the use of drugs that provide survival time with good quality, as long as the type of pathology and the signs of compensation are not severe [4].

### Conclusion

The use of medications is appropriate, as long as the type of pathology and the signs of compensation are not serious.

### Bibliography

1. Bonagura J. "Balloon valvuloplasty for congenital aortic stenosis". Proc 19th ACVIM Forum (2001): 154-155.
2. Sánchez S. "How to detect the cardiac patient in the daily clinic". Obtained from First AVA virtual congress (2020).
3. Brambilla PG., *et al.* "Complex Congenital Heart Disease: Prevalence and Clinical Findings". *Veterinary Research Communications* 27.1 (2003): 735-738.
4. Figueroa G., *et al.* "Tricuspid valve dysplasia with ventricular septum defect in an English Bulldog breed dog. REDVET case report". *Electronic Journal of Veterinary Medicine* 17.7 (2016): 1-7.
5. Fernández del Palacio J., *et al.* "Congenital heart disease in the dog: patent ductus arteriosus, pulmonary stenosis and aortic stenosis". *AVEPA* 16.1 ().
6. Plumb D. "Manual of Veterinary Pharmacology". 6th edition. Buenos Aires: Inter-Medical (2010): 402.
7. Gómez L. "Degenerative valve disease in dogs: update on its diagnosis, treatment and prognosis". *Revista Colombiana de Ciencias Pecuarias* 24 (2011): 201-208.
8. Muñoz P and Gómez L. "Characterization of the clinical conditions and echocardiographic parameters of pulmonary pressure in canines with degenerative valvular disease". *Revista de Investigaciones Veterinarias del Perú* 30.1 (2019): 119-132.

**Volume 6 Issue 4 April 2021**

**©All rights reserved by Iván Peña G., *et al.***