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Reginald A. Nadeau

Carlos Grodsinsky

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A CASE OF TETRALOGY OF FALLOT IN A DOG

REGINALD A. NADEAU, M.D.* AND CARLOS GRODSINSKY, M.D.**

Congenital heart disease in dogs is relatively rare. In two recent surveys in which groups of 3,000 dogs were screened for spontaneously occurring cardiovascular disease, the incidence of congenital cardiac anomalies was of the order of 0.5% and 1 per cent.²

Figure 1

Dorso-ventral x-ray of the chest. The right border of the heart is prominent. The lung fields appear avascular.

*Division of Cardiovascular Diseases.
** Division of Thoracic Surgery.
CASE REPORT

This report describes a 6 month old cocker spaniel with stunted growth, cyanosis and dyspnea at rest. The animal weighed 4.5 kg.; the heart rate was 200/minute. A thrill was felt over the lower anterior thorax bilaterally, and a soft systolic murmur varying with respiration was heard on both sides of the lower sternum.

A dorso-ventral x-ray of the chest (Figure 1) revealed a wide transverse diameter of the heart with a prominent right border and avascular lung fields.

The electrocardiogram illustrated in Figure 2 showed extreme right axis deviation and abnormal high and pointed P waves in leads II, III and aVF.

A midline sternal-splitting thoractomy under pentobarbital anesthesia was carried out by one of us (C.G.). A markedly hypertrophied right ventricle with a small pulmonary artery was noted. Due to the small size of the animal a complete repair was not attempted. Although a systemic-pulmonary shunt of the Potts type was considered, a Brock valvulotomy was elected. This was carried out, producing some increase in pulmonary artery flow; however, the dog survived for only 2½ hours after the chest had been closed.
TETRALOGY OF FALLOT

Figure 3 is a post-mortem photograph of the anatomical specimen. The wall of the right ventricle measured 1.6 cm. in thickness and the ventricular septal defect 1 cm. in diameter. The outflow tract of the right ventricle was diffusely narrowed and the pulmonary artery was small and thin. The pulmonary valves were of normal structure.
The association of pulmonary stenosis, interventricular septal defect, right ventricular hypertrophy and overriding aorta, classically described by Fallot in 1888, is the most common form of cyanotic congenital heart disease in man. In the canine species it appears to be a relatively rare anomaly, although a number of isolated cases have previously been reported. In Detweiler’s series of 15 cases of congenital heart disease in dogs, one case of Tetralogy of Fallot is described.

The anatomical defects and the clinical manifestations of this anomaly are similar in the dog to those in man. The description of only one attempt at surgical correction was found in the literature.

A case of Tetralogy of Fallot in a dog is presented. A review of the literature reveals that this malformation rarely occurs in this species.

REFERENCES