

Morphological aspects of the ostrich (*Struthio camelus*) cardiac valves

Figueiredo, MA.¹, Silva, BX.¹, Bath, FVC.¹, Alonso, LS.¹ and Chagas, MA.²

¹Departamento de Biologia Animal, Universidade Federal do Rio de Janeiro

²Departamento de Morfologia, Universidade Federal Fluminense

The creation of commercial ostrich in Brazil is a relatively new activity and that has been expanding significantly. They are scant information regarding the anatomical aspects of this species. Objectives: The objective of this work is the morphological characterization of heart valves in ostrich, providing subsidies for the better understanding of cardiovascular morphofisiology. Thirty baby ostriches, 15 males/15 females, aged between 1 and 15 days, were used. The birds have been identified and sex-selected. There has been incised on the vessel of the points most distant from atrial surface in order to preserve the integrity of the body. Then were fixed in buffered formalin solution by 24 hours. After this time, the hearts were washed and dissected. Two types of cuts were made. In 10 hearts section was in the coronary groove and the other the incision was made in the wall of the ventricles towards the major axis of the body. In all hearts examined, it was possible to identify the right atrioventricular valve (RAV) presents as a double blade, with a principal leaflet and other fine. The RAV has three anchorages: central, septal and principal. The setting occurs in central wall of the right ventricle and causes the extensions that make the two leaflets, called blade main and fine blade of right atrioventricular valve. Main blade, after emerging from the central fixing it was extended toward the apex of the heart, which inserts itself near the small septomarginalis trabecula. The thin blade, with approximately half the length of the main blade, is within the interventricular septum, near the base. A narrow passage communicates the cul de sac to ventricle. It was not observed presence of tendineous strings or papillary muscles. The ventricular wall, with a range of tissue that begins in the vicinity of the central fixing, toward the apex, presents itself with discrete roughness, giving an irregular appearance, in contrast to the surface ventricular towards base, which has smoothness. The left atrioventricular valve (LAV) consists of a double layer of endocardium and intermediate fibrous tissue. The free border of this tricuspid valve carries a varying number of chordae tendineae. One cusp is situated against the septum while the other two cusps are on the outer wall. The aortic valve, like the pulmonary valve, consist of three valvulae. The fibrous constitution of RAV is similar to that found in other mammals and birds. However, the LAV, to be almost entirely formed of cardiac muscle, suggests an active participation in cardiac physiology.