

## **Anatomical aspects of the aortic arcs of the calf with two hearts**

Santos, AS., Albuquerque, PPF., Neto, OLS., Silva, MB. and Santos, RMB.

Universidade Federal Rural de Pernambuco

The congenital malformations correspond to the one of the biggest groups of congenital anomalies that reach the bovines. The incidence is higher in those animals compared to other domestic species and occurs more frequently in the anterior part of the body. The embryonic period, when the cell growth and differentiation are in high activity, is the stage most likely to teratogens, because it is when the primitive germ layers and the rudiments of organs are formed. The origin of the aorta is similar to the pulmonary trunk but leaves the left ventricle. The ascending aorta passes dorsocranially between the pulmonary artery trunk. It turns up then abruptly caudodorsally, and inclines itself slightly to the left, forming the aortic arch. The first part of the aorta originates the subclavian arteries pairs and the common carotid pairs. These vessels come together at their roots to form a short brachiocephalic trunk. The objective of this research is to compare the anatomical aspects of the aortic arch of a normal calf with the aortic arch of the calf of two heads and two necks. A stillbirth calf, with two heads, two necks, a trunk and four members, female sex, that came from the city of São Lourenço da Mata, Pernambuco, was brought to the Rural Federal University of Pernambuco. In the Department of Anatomy there has been injected by the umbilical cord and then dipped in aqueous solution of formaldehyde at 10%. Then started to dissect in the face of the ventral cervical region to pubic region. Then the members were separated from the thorax and there was the incision of the skin, muscles and ribs of the thoracic region to observe the organs of the cervical ventral and thoracic cavity regions. In the animal in study two hearts were found. In the right heart, the aortic arc was presented with greater size in relation to the left and a long brachiocephalic trunk, different than that observed on the left. The aortic arc continues forming a common trunk with the aortic arc of the left heart, that will result in the descending aorta. From there, a brachiocephalic trunk leaves, from which comes the right subclavian artery and a bicarotid trunk that will arise to both common carotid arteries. In the left heart, a brachiocephalic trunk was found. It originates a bicarotid trunk, where it initiates the both common carotid arteries (left and right) and the left subclavian artery. To obtain more precise data about this anomaly, more macro and microscopic research is needed and mainly disclosure of cases that arise, to check up the cause of births of calves with congenital birth defects.