

Anatomy study of the thymus of a two heads and two necks calf

Souza Neto, OL., Albuquerque, PPF., Santos, AS., Silva, MB. and Santos, RMB

Universidade Federal Rural de Pernambuco

The thymus is a lymphoid structure of great importance for young animals, excellently acting on the after-birth development and maintenance of their immunologic ability. The organ enlarges during childhood, atrophying at puberty, and is the largest lymphoid structure with high lymphopoietic function during that period. The thymus of a normal calf is divided into one thoracic lobe, and into a cervical pair segment, with two cranial branches. In its apogee, the thymus occupies the ventral part of the cranial mediastine. Through an odd and narrow intermediate lobe, it joins the cervical segment with its cervical branches. The congenital anomaly is characterized by the union of body parts between identical individuals. This type of anomaly corresponds to one of the biggest groups of congenital malformations in the bovines. The incidence of congenital anomaly is bigger in bovines when compared with other domestic species. The embryonic period, when the growth and the cellular differentiation are in high activity, is the most susceptible stage for the appearance of teratogens, because it is the stage when the organs and the primitive germs layers are formed. The goal of this research was the study of macroscopic aspects of the thymus in a calf with congenital anomaly that have two heads and two necks. A stillbirth calf, female sex, with two heads, two necks, one trunk and four members, that came from the municipality of São Lourenço da Mata, Pernambuco was brought to the Pavilion of Anatomy in the Rural Federal University of Pernambuco. There has been injected by the umbilical cord formaldehyde at 10% and then dipped in the same solution. Then it was initiated the dissection of the ventral cervical region until the pubic region. There was the incision of the skin, muscles and ribs to observe the organs located in the ventral region of the two necks and in the thoracic and abdominal cavity. It was observed that the thymus of the right neck is larger than left one; it have a developed base beginning in the distal third of the cervical trachea ending in its middle third. From the base two prolongations appear, one at the right and the other one at the left. The two prolongations become funneled in the cranial direction, as describe in the literature. The presence of the odd thoracic lobe was not observed. More research in the macroscopic and microscopic area is necessary to obtain better precise data about this anomaly. And such cases must be reported to find the incidence of such anomalies.