

**INTRODUCTION**

The fusion and fission hypotheses attempt to explain the development of conjoined twins. In the types of symmetrical conjoined twins is the cephalopagus, and within these is cephalothoracopagus iniop.

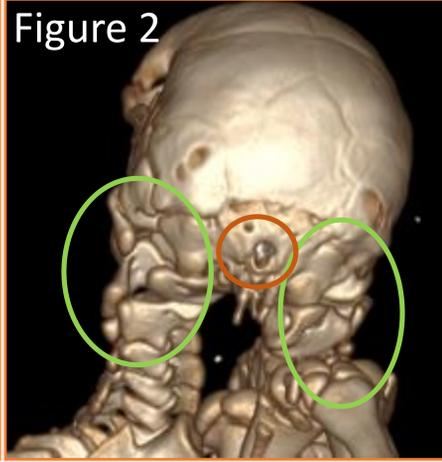
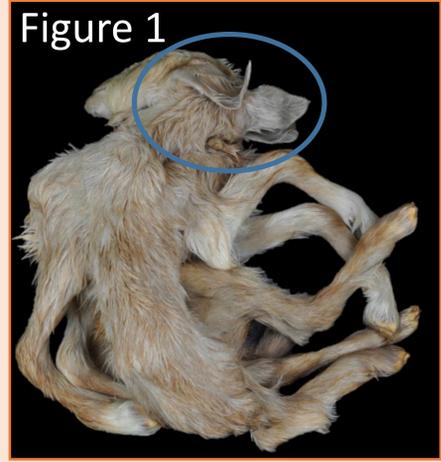
**OBJECTIVES**

Make a detailed description of the external and internal anatomy of the attached twins and establish a precise diagnosis of the case.

**MATERIAL AND METHODS**

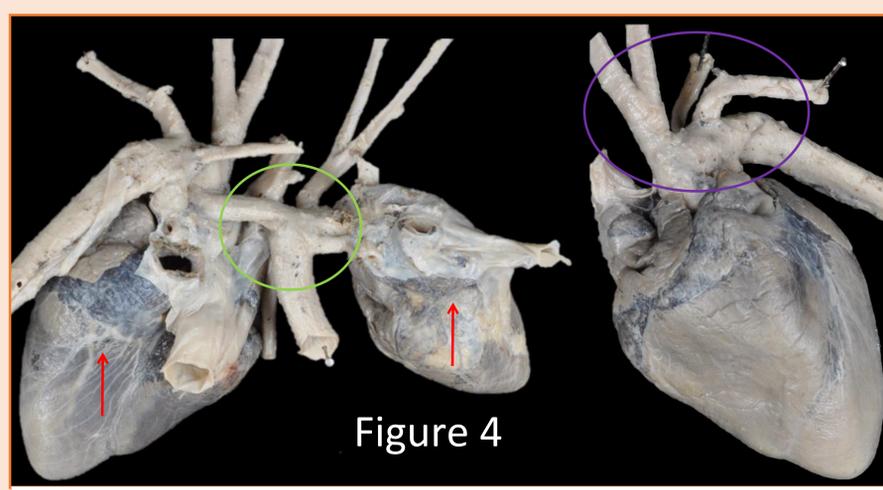
The animals came from the collection of congenital malformations of the area of anatomy of the veterinary faculty of the UAB. An external examination, a CT and a 3D reconstruction at the Veterinary Hospital of the UAB and dissection of the animal at the UAB Veterinary Anatomy Unit were carried out.

**RESULTS AND DISCUSSION**

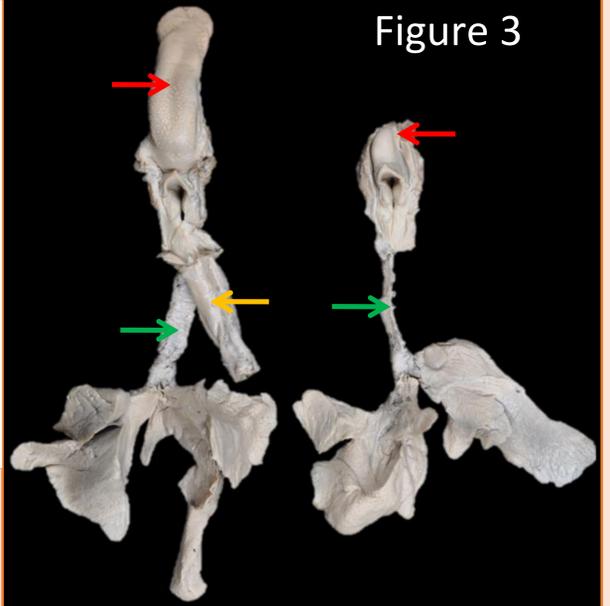


The ventral union and **two additional ears** in the occipital region (Figure 1), allow to classify them as cephalothoracopagus iniop.

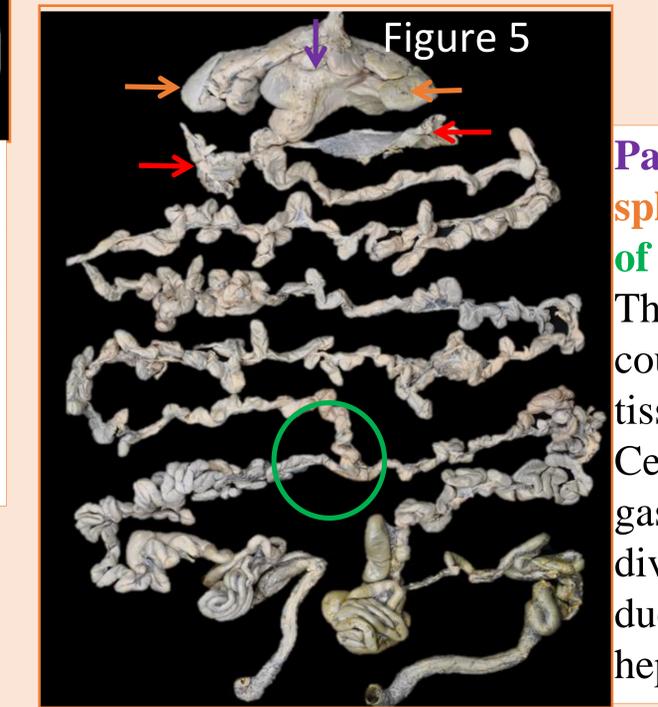
**Two occipital bones** articulated with two independent **vertebral columns** and **third common auditory canal** (Figure 2). Is typical of cephalopagus and cephalothoracopagus.



Two opposing larynx; **Two tongues**, one normal and one hypotrophic; **Two tracheas** and among them a **common esophagus**; Two lungs, both right lungs lack tracheal bronchus and cranial lobe (Figure 3). This could be due to the splitting of pharyngeal tissues and visceral arches of the involved area.



**Two hearts**; **Union of both hearts by pulmonary trunk and aorta**; **Anomalous branch of the aorta** (Figure 4). The cardiogenic area divides and deviates along with the rostral end of the embryonic disc. A duplication of tissues at the level of the third and fourth pharyngeal pouches, could explain a malformation of the aortic arches.



**Partially divided stomach**; **Two spleens**; **two pancreas**; **Bifurcation of the jejunum**; (figure 5) two liver. The duplication of gastric cavities could be due to a duplication of tissues in the outline of the stomach. Cephalothoracopagus often share gastrointestinal tracts up to Meckel's diverticulum. Consequently a single duodenum can give rise to two hepatic primordia.

**CONCLUSIONS**

After the study of the external and internal anatomy, the specimen was classified as cephalothoracopagus iniop. Duplications of observed organs mainly affected embryonic pharyngeal derivatives, as well as the heart and aortic artery derivatives. Although the mechanism of origin of organic duplicities is scarcely explained in the literature consulted, we can hypothesize that the splitting of the embryonic pharyngeal tissue and nearby areas would be the ultimate cause of the morphological anomalies of the cephalothoracopagus.