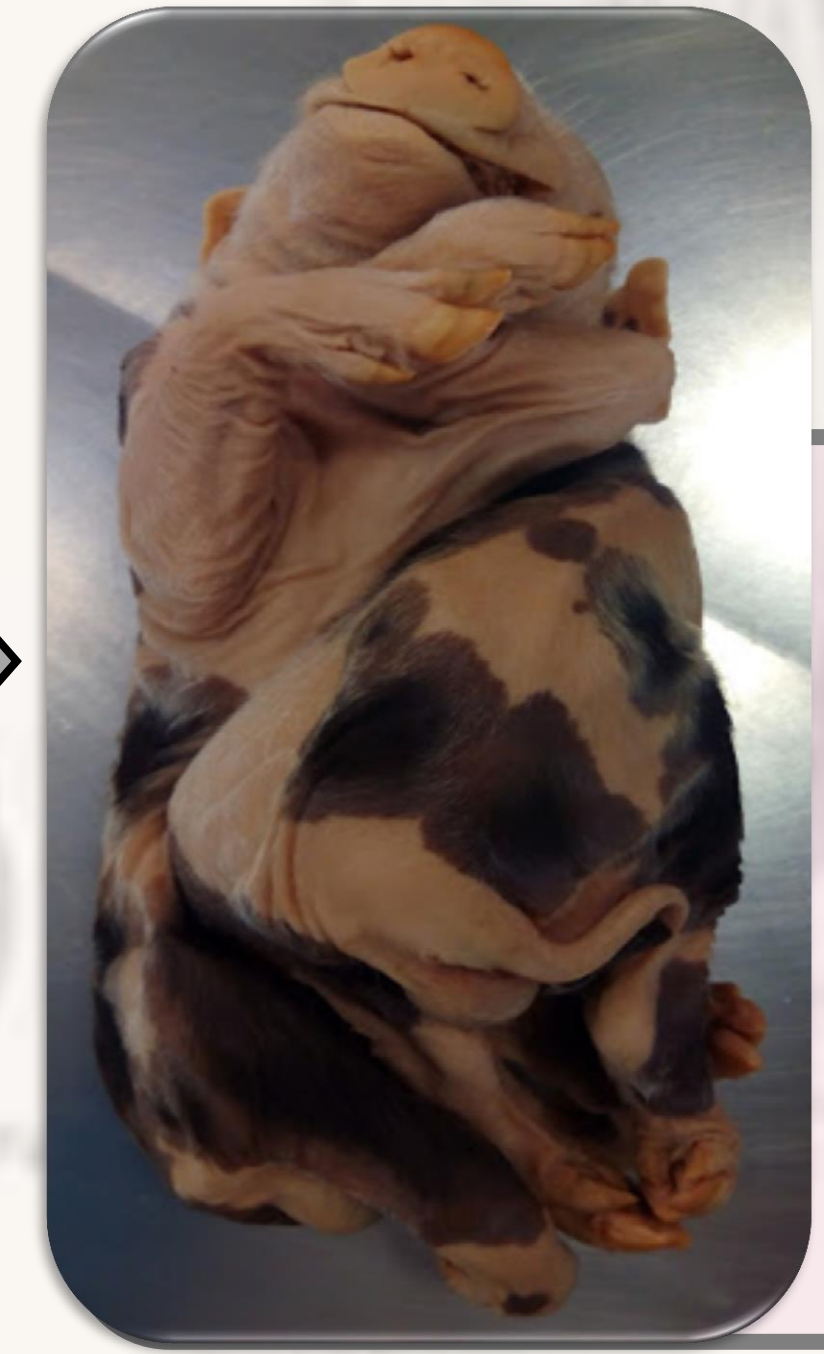
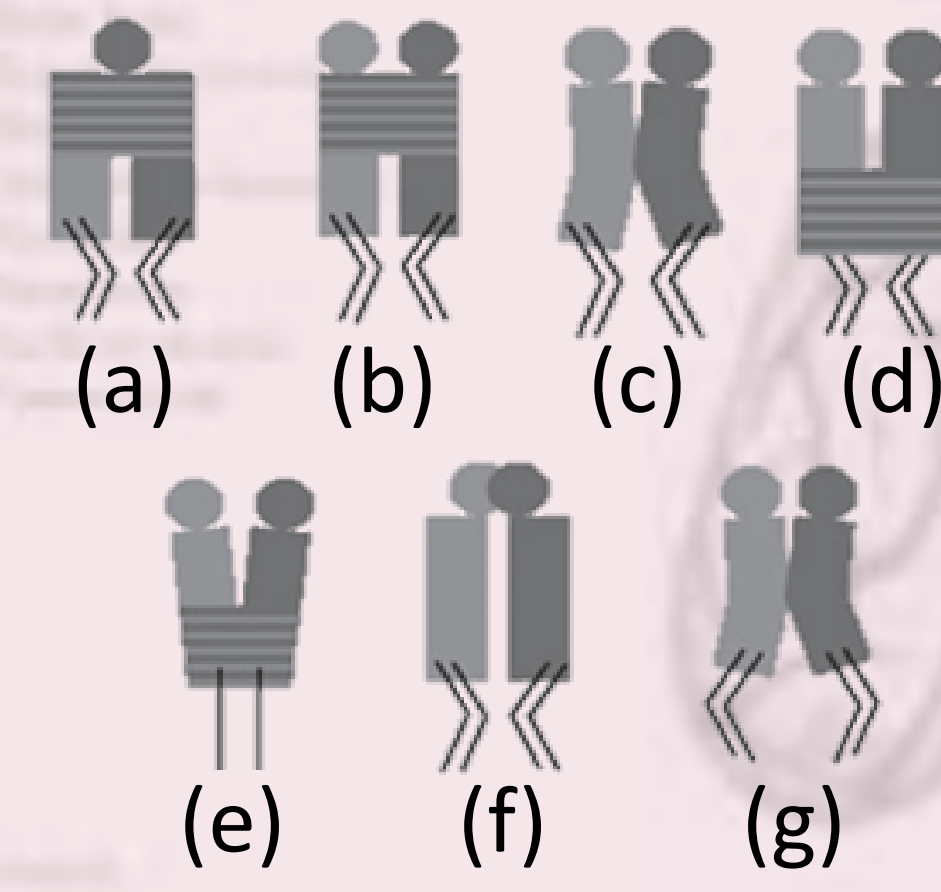


# Anatomy of a case of cephalothoracopagus in the porcine species

## Introduction:

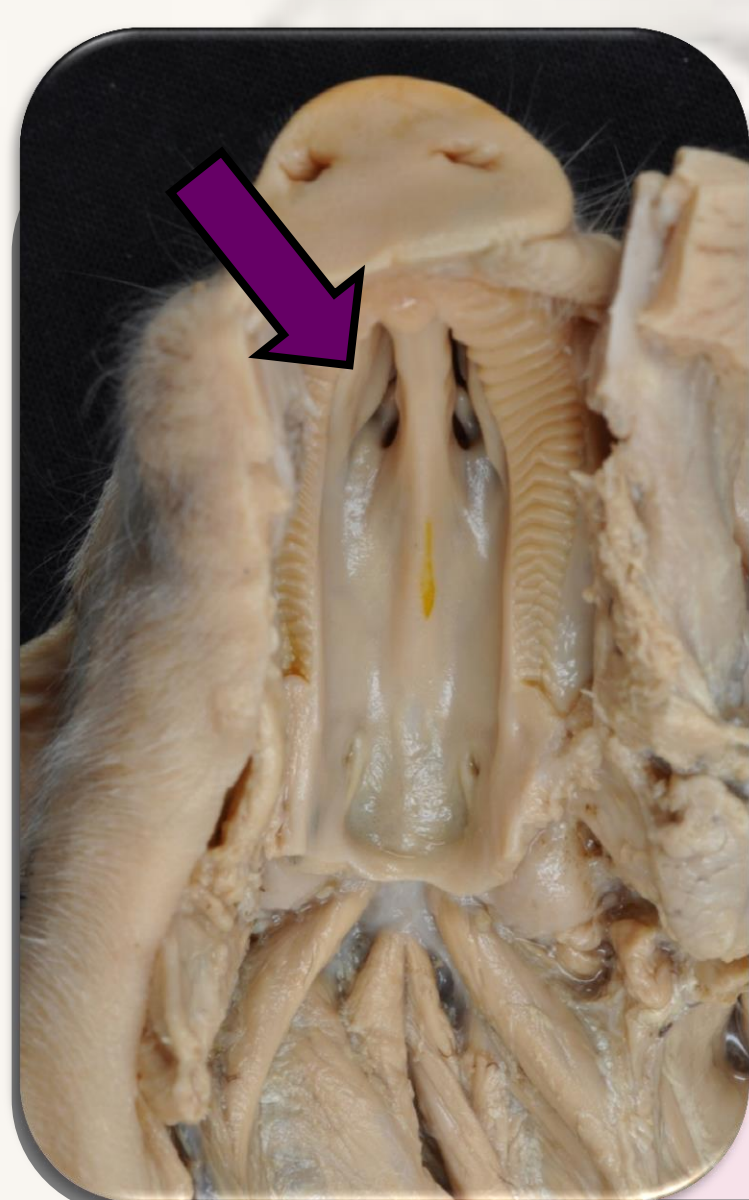
- Two theories of formation of the conjoined twins
  - ↗ Fission
  - ↘ Fusion
- Conjoined twins
  - Symmetric
    - Ventral union: cephalothoracopagus<sup>(a)</sup>, thoracopagus<sup>(b)</sup>, omphalopagus<sup>(c)</sup>, ischiopagus<sup>(d)</sup>, parapagus<sup>(e)</sup>.
  - Asymmetric
    - Dorsal union: craniopagus<sup>(f)</sup>, pygopagus<sup>(g)</sup>, rachipagus.
- Low incidence of conjoined twins in the porcine species and even less in males.



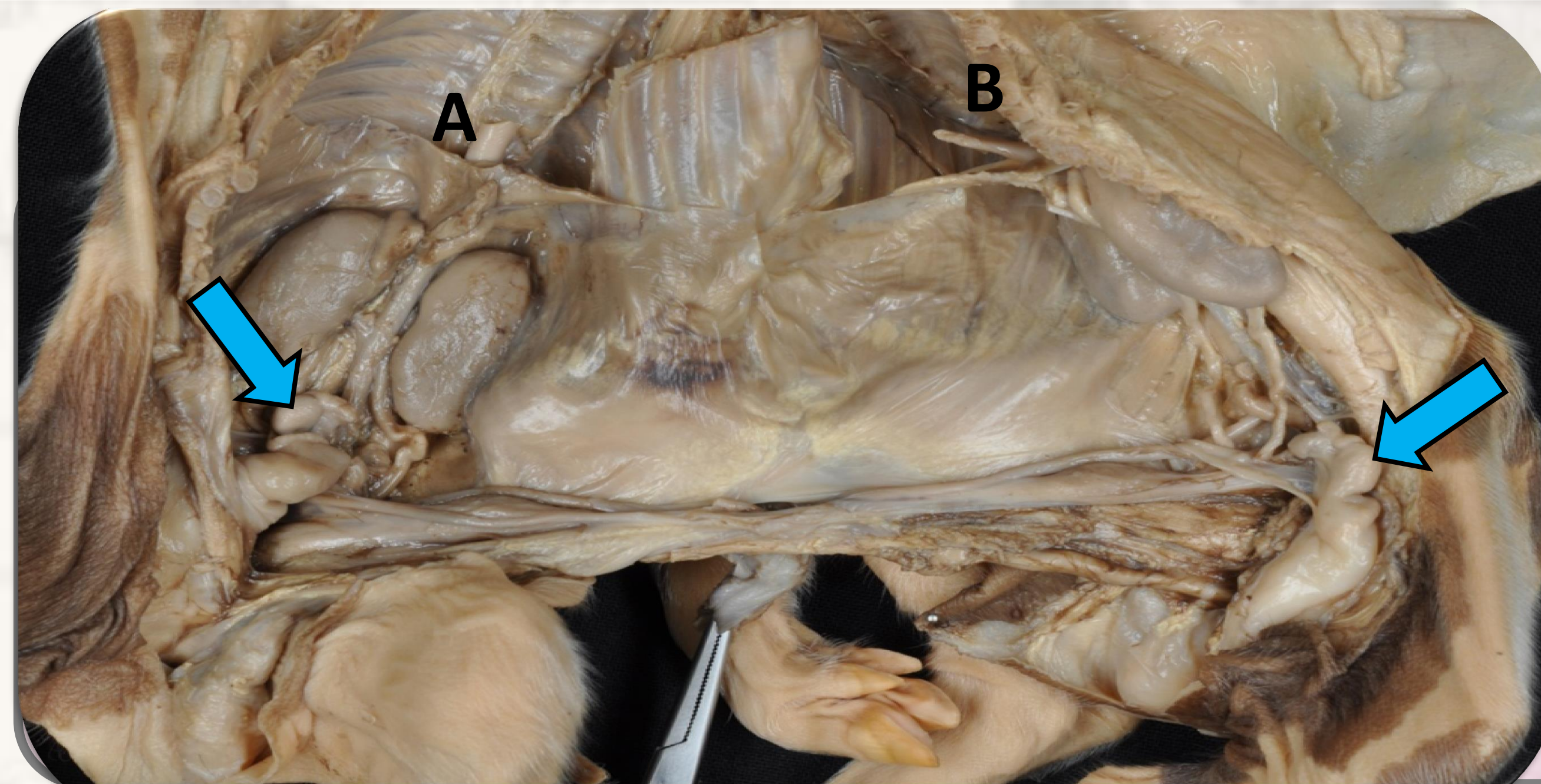
Ventral vision of the symmetric conjoined twins.

**Objective:** Describe and diagnose with precision a case of conjoined twins in the porcine species.

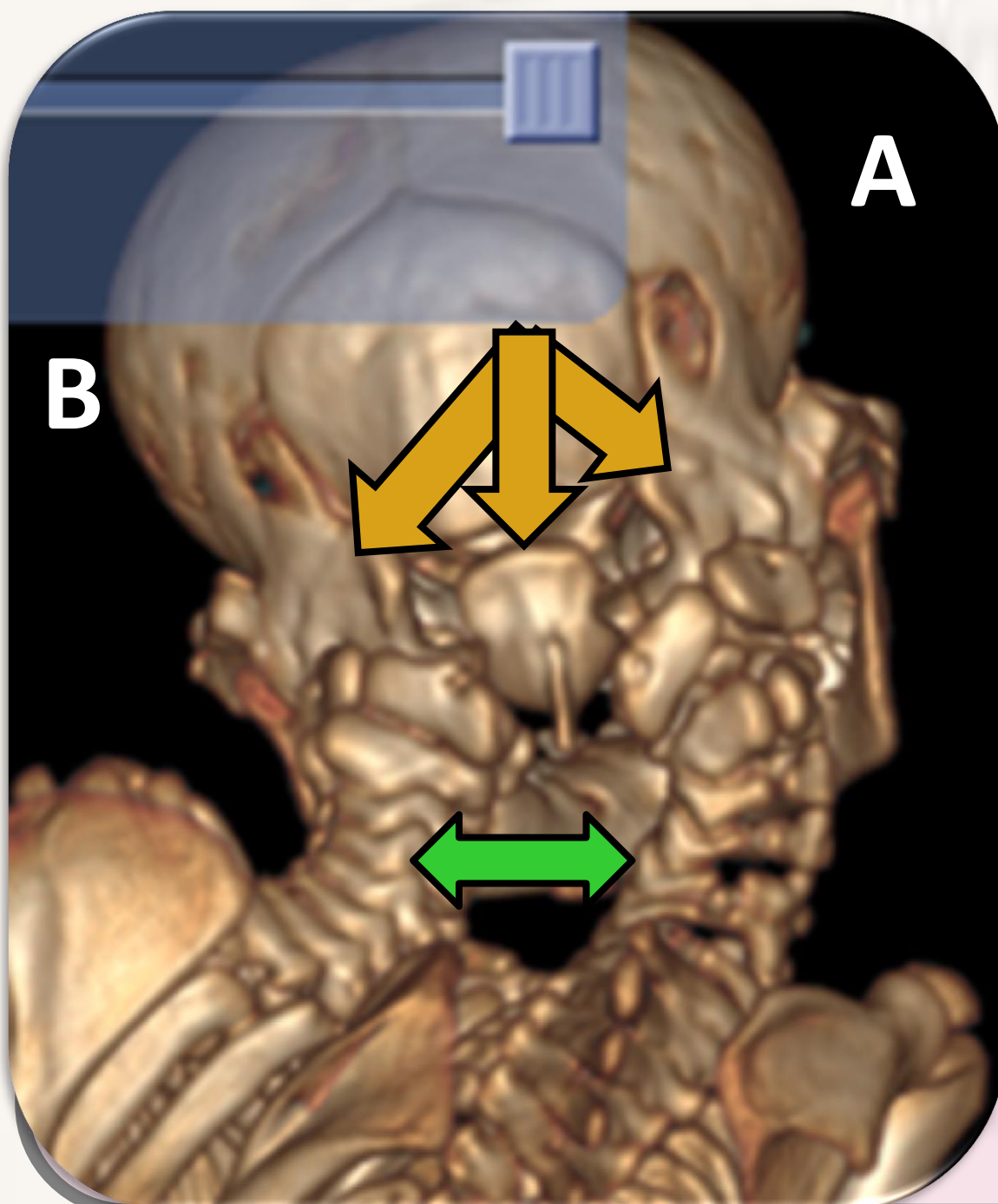
## Results:



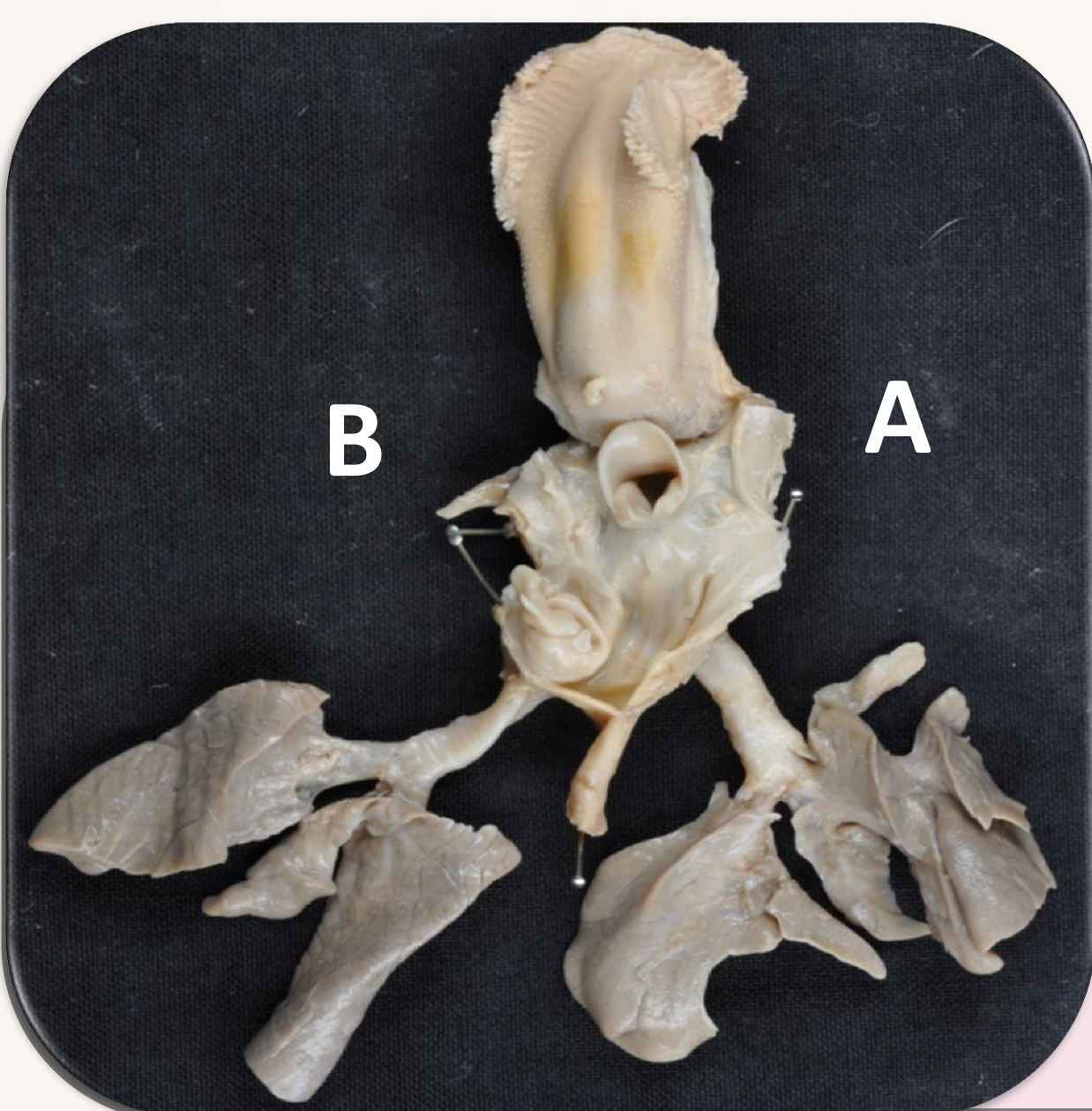
Ventral vision of the interior of the oral cavity of the shared cranium.  
One can see the **cleft palate** and through which the nasal duplicated cavity is made visible.



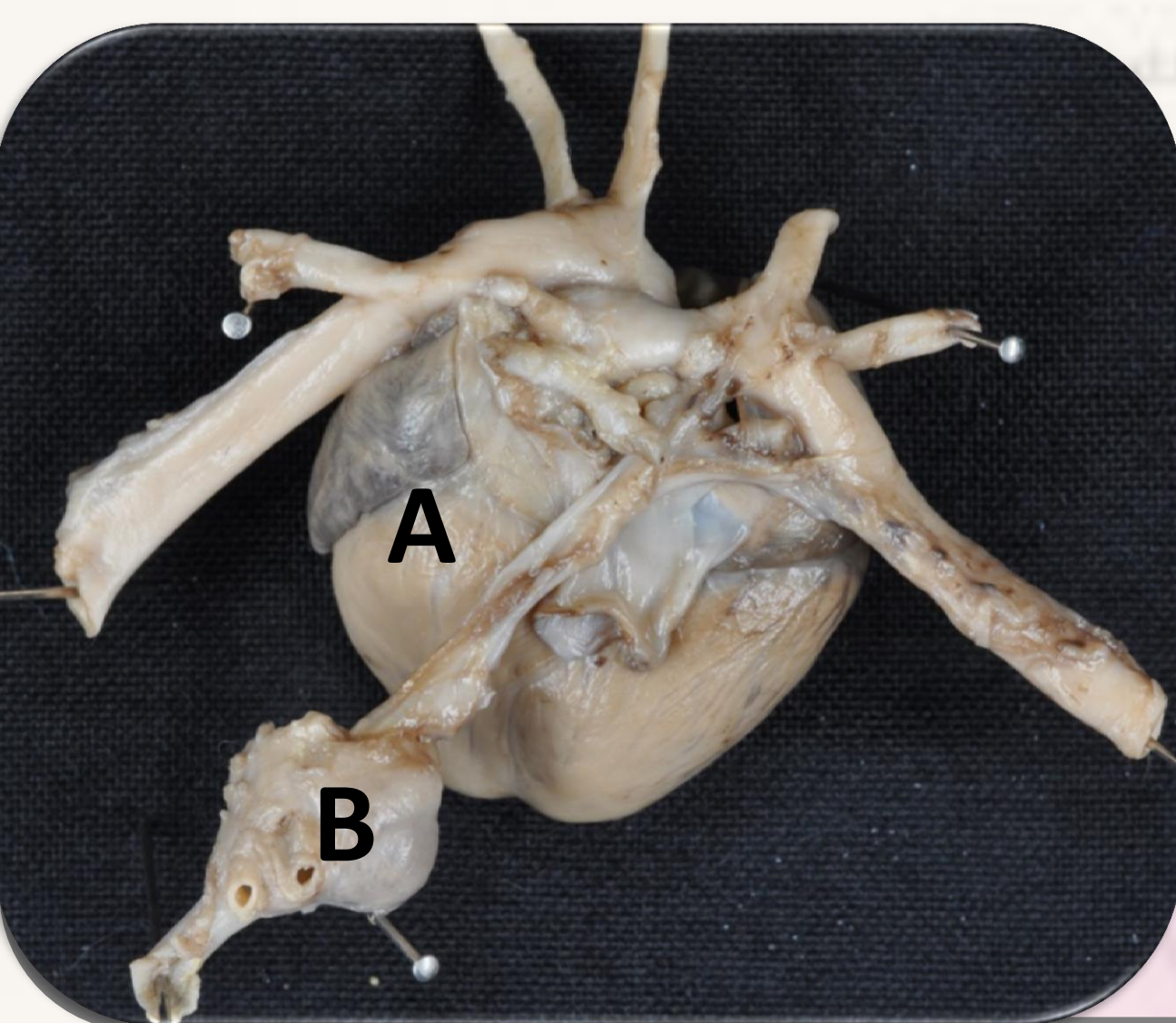
Ventral vision of the abdomen of both individuals.  
A **cryptorchidic testicle** is seen in each of the individuals.



Caudal vision of the cranium with reconstruction 3D CT scan. It shows the **two vertebral columns** that articulate with the **three occipital bones**.



Dorsal view of the tongue, pharynx, larynx and tracheobronchial trees of individuals A and B



View of the atrial side of the hearts of individuals A and B with their respective vessels.



Vision of the gastrointestinal tract. A single **symmetrical stomach** can be seen, and the **bifurcation in two intestinal tracts at the level of the distal jejunum**. Spleen and part of gastrointestinal tract (the ileum, the caecum, the colonic disc and the descending colon) they are duplicated. The organs have less development in individual B.

## Conclusions:

- Diagnosis of the case: Cephalothoracopagus deradelphous.
- Internal duplication of the internal anatomy is evidenced at the level of the caudal pharynx and it implies to the organs of the low respiratory tract and in a partial way some digestive organs.
- Less development of the organs in one of the conjoined twins. Certain asymmetry is habitual in this type of symmetrical unions.