

**THE MORPHOTOPOGRAPHY OF THE ORGANS IN THE
THORACIC AND ABDOMINAL CAVITIES IN THE CHIROPTERS
FROM THE FAM. *RHINOLOPHIDAE***

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Summary

Because of the human disturbances many European species of chiropters has decreased their populations (1, 5).

All species of chiropters are protected in our country by the law (2).

The mystery surround the bats and the protection program introduced in our country in 1995 conducted to the study of morphotopography of the organs in bats from the cave nr. 4 placed in Valea Jiului (3, 4).

Key words: chiropters, splanchnology

Materials and methods

Five bodies of bats from fam. *Rhinolophidae*, sp. *Rhinolophus hipposideros* have been dissected, studied and photographed. The features were described according to N.A.V (6).

Results and discussions

The thoracic cavity is separated by a thin and cranially convex diaphragm the abdominal cavity.

The heart is big and oval shape, and placed in left half of thoracic cavity.

The lungs are appreciatively equals; the right lung is bigger and undivided in lobes. The heart has the same shape like the right lung (Fig. 1).

Liver is placed in the concavity of diaphragm and consists of 4 lobes as follow: right lobe, left lobe, quadrate lobe and caudate lobe. The gall bladder is situated between the right and quadrate lobe, being spherical (Fig. 2).

The stomach is in direct contact with the right lobe of the liver, and the cardia is placed in the middle of small curvature. The spleen, narrow and long is attached to the great curvature through the gastro-lienal ligament (Fig. 3, Fig. 4).

The caliber of the intestine is the similar from the beginning to the end, there cannot be made the demarcation between small and large intestine (Fig. 5).

The intestine starts in the pyloric part of the stomach, from the left to right side, in contact with the liver, lies to the right kidney where makes two loops, being sustained by an circular ligament (Fig. 3).

In the median plan the ventral loop is prolonged with a straight part which ends in the rectum.

The rectum is the largest part of intestine, tightly expanded and through its transparency the hole can be identified.

According with the N.A.V. (1982) the intestine consists: duodenum, proximal part in contact with liver, jejunum and ileum, circular and overlapped segment, rectilinear part as colon, and the distal part as rectum.

The kidneys are placed in the sublumbar region, the right kidney is cranially than the left kidney, attach to the right lobe of liver. Are smooth and bean shape. In the cranio-medially extremity of each kidney are presented small and rounded adrenal glands. The caudal extremity of each kidney demarks the urinary bladder (Fig. 6).



Fig. 1. Thoracic cavity and the heart in bat
1.Heart, 2. Left lung, 3. Right lung



Fig. 2 The liver
1. Right hepatic lobe; 2. Left hepatic lobe; 3. Quadrate lobet; 4. Caudate lobe; 5. Gall bladder

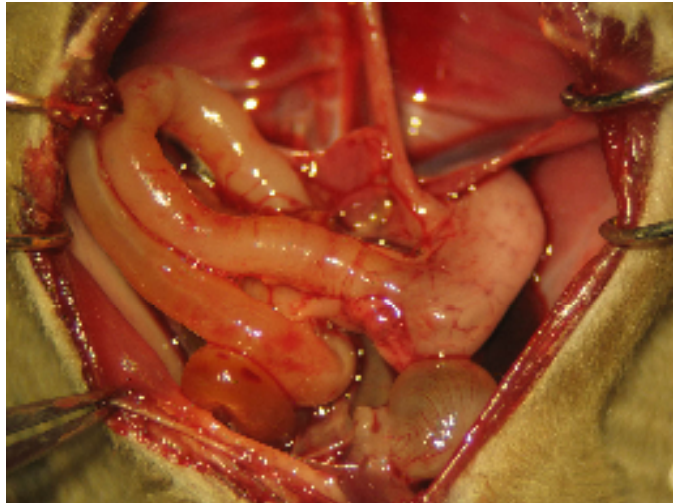


Fig .3 Post diaphragmatic part of the digestive system in bat
Diaphragm; Esophagus; Stomach; Intestine; Spleen; Urinary bladder

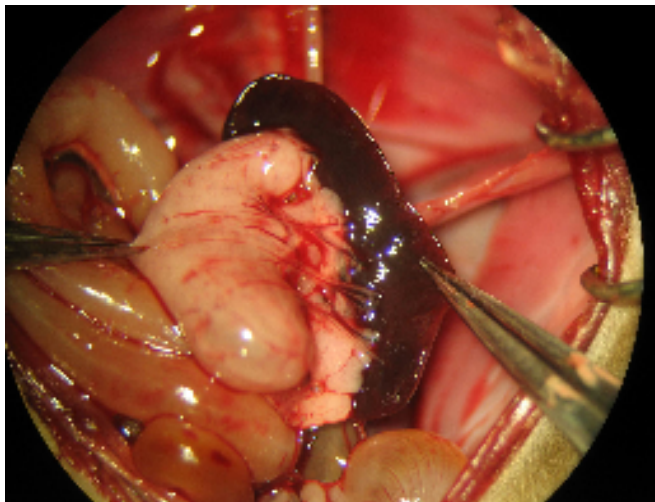


Fig .4 Post diaphragmatic part of the digestive system in bat
Diaphragm; Esophagus; Stomach; Intestine; Spleen; Urinary bladder



Fig. 5 The stomach, cardia, spleen and intestine in bat

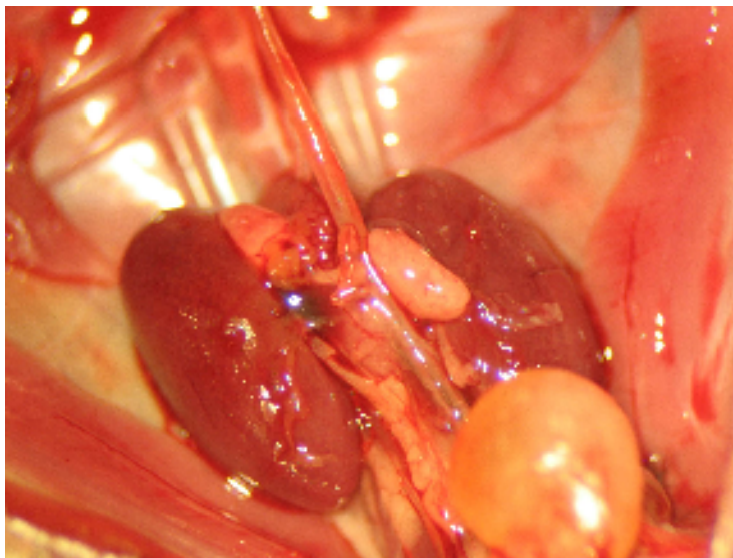


Fig. 6 Kidneys and the adrenal gland in bat

Conclusions

- The heart is large and occupies the left half of the thoracic cavity.
- The lungs are not divided in lobes.
- The liver consists in 4 lobes and presents gall bladder.
- Small and large intestine has same caliber.

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