

## Short Reports

## VISCERAL LYMPH NODES IN ABDOMINAL CAVITY OF DEGUS

Petrenko V.M.

St.-Petersburg,

e-mail: [depanatomy@hotmail.com](mailto:depanatomy@hotmail.com)

Degus (shrub rat) lives in South America, falls under the order of rodents, are used in experiments including program of investigations of sugar diabetes in USA and Europe. Lymph nodes (LN) in abdominal cavity of degus are not described in literature.

**Materials and methods of research.** I study visceral LN in abdominal cavity of 10 degus of

2–3 months old of both sexes by preparation after fixation in 10% neutral formalin.

**Results of research and their discussion.**

All visceral LN in abdominal cavity of degus have bean's shape, but more often seen as oval or round because they are small. I divide these LN (fig. 1, 2) by topography on two groups:

1) the central LN, they lie about celiac-mesenteric artery (1) and caudal mesenteric artery (1);

2) the peripheral LN, they lie along branches of celiac-mesenteric artery – hepatic, splenic and cranial mesenteric arteries and ending branches of the last artery.

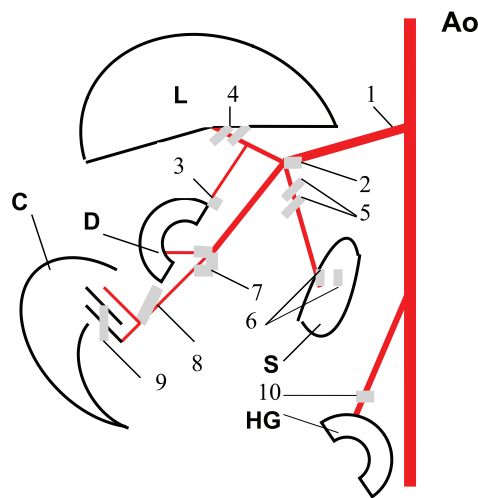


Fig. 1. Scheme of placing of visceral lymph nodes (LN) in abdominal cavity of degus: Ao – aorta; L – liver; S – spleen; D – duodenum; C – caecum; HG – hind gut; 1 – celiac-mesenteric artery; 2 – paraaortic LN; 3 – gastric LN; 4 – hepatic LN; 5 – pancreatic LN; 6 – splenic LN; 7 –pancreaticoduodenal LN; 8 – ileocolic LN; 9 – ileocaecal LN; 10 – caudal mesenteric LN on the caudal mesenteric artery

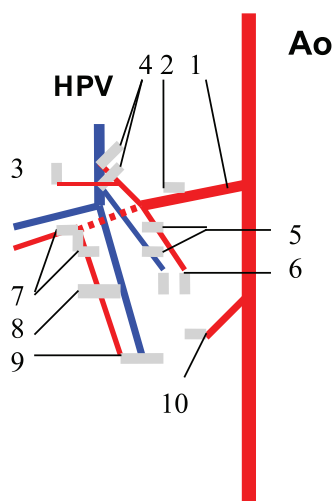


Fig. 2. Scheme of placing of visceral lymph nodes (LN) in abdominal cavity of degus: Ao – aorta; HPV – hepatic portal vein; 1 – celiac-mesenteric artery; 2–10 – LN (designations as on Fig. 1)

The short trunk of celiac-mesenteric artery in degus is the common beginning of celiac and cranial mesenteric arteries. Thus small paraaortic or petropancreatic LN (1), which lies about celiac-mesenteric artery, is the common for two groups of LN – the celiac and the cranial mesenteric. Actually the celiac artery is absent because it divides on hepatic and splenic arteries at once. I find small hepatic LN (2) on the left side from hepatic portal vein, small gastric or subpyloric LN (1) – between stomach and bulb of duodenum, small pancreatic LN (2) – about splenic artery and vein, between body and tail of pancreas. Splenic LN (2), the most small among all visceral LN in the abdominal cavity, lie near hilus of spleen and tail of pancreas.

The cranial mesenteric artery in degus is short because it originates from branch of aorta and divides on ending branches about duodenojejunal flexure. The own cranial mesenteric (or pancreaticoduodenal, or interintestinal) LN (3-4) surround bifurcation of soname artery moreover the right of them (1-2) adjoin to the right branch and the left of them (2) – to the left branch (ileocolic artery). I find the conjection of these LN at the beginning of common root of mesentery and mesocolon, between duodenojejunal flexure and head of pancreas, near confluence of right and left roots of cranial mesenteric vein. Ileocolic LN (1), the most large among visceral LN in the abdominal cavity of degus, lies at the end of common root of mesentery and mesocolon, about end of bundle of ileocolic blood vessels, about division of ileocolic artery on the end branches. Ileocecal LN (1), unstable, with sizes about (a little smaller than) ileocolic LN, lies on the base of caecum, its medial (right) surface, between initial part of ascending colon and end of ileum, but in connection with ileum.

So visceral LN in abdominal cavity of degus are situated along odd visceral branches of abdominal aorta, among different inner organs. The head of pancreas separates paraaortic, hepatic and pancreatic LN (cranially) from pancreaticoduodenal LN (caudally), the common root of mesentery and mesocolon – pancreaticoduodenal LN from ileocolic LN, the base of caecum – ileocolic LN from ileocecal LN, loops of intestine and ascending colon – cranial and caudal mesenteric LN.

**Conclusion.** Until I studied visceral LN in abdominal cavity of white rat [1, 2] and guinea-pig [3]. Quantity of visceral LN in abdominal cavity variates among these rodents: the largest – in rat, the least – in degus. These LN are situated always along odd visceral branches of abdominal aorta – celiac, cranial and caudal mesenteric arteries and their branches. The largest numerous and variative groupe of these LN – the cranial mesenteric, the least – the caudal mesenteric (1-2).

Special topography, reduction of general quantity and subgroups of central cranial mesenteric LN in degus correlate with features of its regional organogenesis, first of all – the least liver among these rodents. Just liver regulates interactions between another organs and vessels in abdominal cavity, their growth and placing, including anlage LN.

#### References

1. Petrenko V.M. Topography of mesenteric lymph nodes in rat // *Europ.J.Nat.Hist.* – 2011. – № 4. – P. 6.
2. Petrenko V.M. Lymph nodes in basin of coeliac artery in rat // *Europ.J.Nat.Hist.* – 2011. – № 6. – P. 6.
3. Petrenko V.M. Visceral lymph nodes in abdominal cavity of the guinea-pig. Topography and classification // *Europ.J.Nat.Hist.* – 2013. – № 1. – P. 28-29.