

EFFECT OF AUTOMOUS TONE TYPE ON STRUCTURE OF INTRAMUSCULAR NERVOUS PLEXUS IN CHICKENS INTESTINE

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The properties of aggregate tone of autonomous centers have been studied in adult chickens (under one year) by the method of variation pulsometry Bajevskyj R.M. (1984). It's determined that defined tone is manifested by two types: sympathotonia (ST) – 17 individuals, and sympato-normotonia – 18 individuals.

After slaughtering of chickens, shading of neural structures of intestines by solution of methylene blue method followed by Dogel was performed and film preparations of intramuscular nerve plexus were produced. Area of nerve loops located at 1 cm² of the intestinal wall were determined from these preparations. As indicated area varies quite considerable in range of size, so in order to obtain more informative research results, we divided all nervous loops into three groups: 1) 0,01 – 3,00 mm²; 2) 3,01 – 6,00 mm²; 3) 6,01 – 9,00 mm². In each intestine the percentage of each group of loops was determined, provided that all the groups together make up 100 %.

Basing on morphometric studies, has been found that different parts of the intestinal wall of chickens characterized by differences in the size of the intramuscular nerve plexus loop. Along the intestinal wall most common are small loops of the first group. Loops of the second group in ST-chickens happen at all intestines besides rectum, and in chickens ST-NT they are also absent in the ileum. The third group of nerve loops is a characteristic feature only for the duodenum. The data shows that rectal of both groups of birds, as well as the ileum of ST-NT-chickens the intramuscular nerve plexus is presented only by tiny loops of the first group. Evidently, is also the fact that along the intestines of chickens the average size of nerve loops are gradually reduced. Typological features of independent tone are manifested in the ratio of different groups of nerve loops within a single intestine. Thus, ST-NT-chickens compared with S tones in all intestines (except rectum) show greater number of the first group and smaller number of loops of the second group.

Autonomic nervous system, autonomic tone centers, intestines of chickens, intermuscular nerve plexus, nerve loop