



Title	THE HISTOLOGICAL CHANGES OF THE UTERINE VEINS OF MULTIPAROUS COWS
Author(s)	HIRAI, Takashi
Citation	Japanese Journal of Veterinary Research, 15(2), 103-104
Issue Date	1967-06
Doc URL	<a href="http://hdl.handle.net/2115/1875">http://hdl.handle.net/2115/1875</a>
Type	bulletin (article)
File Information	KJ00002369296.pdf



[Instructions for use](#)

also measured with rabbits. The responses of these skin temperatures were consequently categorized into two types, as previously done by HONMA et al. The comb, with the greatest fluctuations at medium ambient temperatures, belongs to type 1; wattle and wing tip, with the largest fluctuations both at lower and medium ambient temperatures, belong to type 3.

The fluctuations (with magnitudes of 0.5 to 28°C) were then analyzed as follows :

1) The frequency of the fluctuations at the comb was highest at about 20°C (medium range of temperatures) and decreased both toward lower and higher temperatures. The frequency of the fluctuations at wattle, wing tip and foot was high at nearly all temperatures, that at wattle and wing tip in particular was about twice the maximum value at the comb, that at the foot was intermediate, i. e. between the frequencies at the foot on the one hand and at wattle and wing tip on the other.

2) Wave length and amplitude of the fluctuations differed in appearance 1) comb, 2) foot, 3) wattle and wing tip. One should conclude, therefore, that the skin temperature at the foot does not belong to the same type as that at any of the other spots.

In rabbits the O<sub>2</sub> consumption was approximately the same over the entire temperature range. In fowl it was higher at the lower the temperature. The skin temperature of fowl is thus probably less well regulated than that of rabbits when the environmental temperature is low.

## **THE HISTOLOGICAL CHANGES OF THE UTERINE VEINS OF MULTIPAROUS COWS**

Takashi HIRAI

*Department of Veterinary Anatomy  
Faculty of Veterinary Medicine  
Hokkaido University, Sapporo, Japan*

(Summary of Masters thesis written under direction of Dr. N. KUDO)

The uterine veins were observed in 24 cows, 8 nulliparous and 16 multiparous, histologically. The results may be summarised as follows.

1) The intimal thickening was observed only in the multiparous cases, but not in the nulliparous cases at all.

2) In the nulliparous cases, the subendothelial elastic fibers took a granular arrangement, and in the multiparous cases, the fibers were intensified in continuity and waving, and more elastic substance appeared around the elastic fibers.

3) In the multiparous cases, the elastic fibers increased in the media and the adventitia. In the adventitia, moreover, the transverse fibers became more numerous than the longitudinal ones, and an elastic substance appeared around the fibers.

4) In the multiparous cases, the longitudinal smooth muscle bundles showed a tendency to become larger in size in the adventitia, but the quantity didn't increase conspicuously.

5) The size and the quantity of the longitudinal muscle bundles, and the intimal thickening showed a regional difference; that is, the findings were observed more intensely in the large venous trunks than in the small rami.

6) In comparing the uterine veins with other veins of the body, the author concluded the intimal thickening of the uterine veins depends on the function of the uterus.

### **POSTNATAL DEVELOPMENT OF VARIOUS CELLS IN THE MOUSE LYMPH NODES**

Yann-Ching HWANG

*Department of Veterinary Anatomy  
Faculty of Veterinary Medicine  
Hokkaido University, Sapporo, Japan*

(Summary of Masters thesis written under direction of Dr. N. KUDO)

As a laboratory animal in immunological biology, the mouse is the most popular one. But, unfortunately, there is only a small amount of anatomical data on the lymphatic system of this animal. For this reason, the author has tried to find the aging and regional differences in the appearance of various cells in the mouse lymph nodes.

Submandibular, mesenteric and subiliac lymph nodes of 110 mice, from neonatal to 10 weeks old, were used for the study.

Large pyroninophilic cells and mast cells were found in the lymph nodes of the neonatal mice, and these cells increased in number with maturation. No plasma cells were seen in the lymph nodes of new born mice. At the end of the first week, plasma cells began to appear in lymph nodes. They increased rapidly after the end of the third week. The regional differences of these cells in the lymph nodes of mice were clear. Large pyroninophilic cells predominated in mesenteric lymph nodes. On the other hand, plasma cells and mast cells were found predominantly in submandibular lymph nodes, but scarcely in mesenteric lymph nodes. Finally, the PAS positive cells were very rare in young mice, the