

Methode eignet sich zur B_{12} -Bestimmung für klinische Zwecke. Die von uns gemessenen B_{12} -Konzentrationen im Blut gesunder Menschen und unbehandelter Perniciosakranker stimmen mit denjenigen von Ross (4) überein.

Literatur

1. Thoelen, H. und A. Pletscher: Acta haemat. 10, 186, 1953. — 2. Wallenfels, K.: Z. Naturforsch. 5 b, 438, 1950. — 3. Heinrich, H. C. und H. Lahann: Z. Naturforsch. 7 b, 417, 1952. — 4. Ross, G. I. M.: J. clin. Path. 5, 250, 1952. — Mollin, D. L. und G. I. M. Ross: J. clin. Path. 6, 54, 1953. — Mollin, D. L. und G. I. M. Ross: Brit. med. J. 2, 640, 1953.

Societates

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Morphology and Circulatory System of Spleen and Banti's Disease

1. *Phylogenetic Studies of the Spleen*: Prof. Osogoe (Dep. of Anatomy, Yamaguchi Medical School) was the first to report his phylogenetic studies on the morphologic structure of spleen in various animals from cyclostomes to mammals. Observations on lower vertebrates revealed that the spleens are either situated on the mesogastrium or on the mesenterium, suggesting the possibility of spleen formation in every part of these tissues. The hematopoietic activity of the spleen in every lower vertebrate was found to be mainly lymphocytic, with the exception of cyclostomes in which it is granulocytic, and the structure of the spleen rather similar to that of the bone marrow of mammals. In clasmobranchs, reptiles and birds, the spleens had structures just as finely differentiated as those of mammals, representing well developed periarterial lymphoid sheaths, red pulp and ellipsoids. For the study of the splenic circulatory system the author injected Indian ink into the general circulation of living animals. Tissue sections revealed an open circulation from the central and penicillar arteries to the venous sinuses in the spleen. The sections also showed the injected ink leaking from the walls of the sheathed arteries into the surrounding ellipsoidal tissue and accumulating therein.

2. *Blood Stream in the Spleen*: Dr. Nakata (Dep. of Pathology, Osaka Medical School) demonstrated the streaming of blood in the spleen of the mouse by the transillumination method of Knisley. His movie films caught the stream first in the central artery and then in the sheathed arteries. Blood streaming in the sheathed arteries was demonstrated slowly enough to show the erythrocytes pouring incessantly, into arterial sinuses. The erythrocytes were held up and pooled here for a while and then were suddenly driven into the next sinuses which were supposed to be venous sinuses. Here we could clearly see the erythrocytes wandering intermittently from one sinus to the next, suggesting the existence of some mechanism of regulation of blood stream between these two sinuses.

3. *Moulds of Blood Vessels in the Spleen*: Prof. *Eguchi* (Dep. of Pathology, Gifu Medical School) demonstrated many beautiful moulds of spleen vessels by plastic casting. His preparations clearly demonstrated that the central arteries are connected with sinuses directly by penicilli. As illustrated by *Nakata's* film, his moulds also showed that there are two sorts of sinuses; the one belongs to the arteries and the other to the veins. Besides, the preparations revealed that there exists another capillary system, which was not to be seen in *Nakata's* film. These capillaries originate from the walls of central and sheathed arteries and terminate in the sinuses in red pulp through lymph follicles or reticulum tissues. The diameter of these capillaries has been calculated about 4μ , i.e., smaller than that of the general capillaries. As described above, *Osogoe's* preparations also showed the existence of such streaming. As these capillaries are smaller in diameter than the general capillaries, and *Nakata's* film showed that there is no red cell streaming in these parts of spleen tissue, it was supposed that these moulds of capillaries might show lymph stream or plasma stream. In fact, we can scarcely find red cells in follicles on tissue sections from normal spleen, though bleeding may be seen often in follicles in some pathologic conditions.

Prof. *Imai* (Dep. of Pathology, Kyushu University Medical School) showed in his phylogenetic studies of spleen how the structure of the sheathed arteries is altered by various pathologic conditions.

4. *Experimental Studies of Banti's Disease*: Dr. *Suzuki* (Dep. of Surgery, Osaka-ski Medical School) reported his experiments on rabbits. It was demonstrated that a marked fibrosis of the spleen is produced by repeated injections of foreign protein. Furthermore his experiments revealed that this fibrosis was accompanied by a noticeable elevation of portal pressure (viz. twice as high as normal pressure), and of liver cirrhosis. The author asserted that the abnormal elevation of portal pressure produced by such allergic vessel damages is responsible for the tissue changes of Banti's disease.

5. *Effect of the "Portal-Cava Anastomosis" on Banti's Syndrome*: Against the view of Dr. *Suzuki*, Dr. *Kimoto* (Dep. of Surgery, Tokyo University Medical School) reported his clinical observations of patients with Banti's disease after anastomosis of portal vein and vena cava inferior. In all cases diagnosed as Banti's disease he could recognize a noticeable elevation of the portal pressure. In these patients he performed an anastomosis of portal vein and vena cava inferior. After this operation the elevated portal pressure fell to the level of the vena cava. However, the general symptoms of these patients never improved and the enlarged spleens were not much reduced. The blood picture did not improve, either. From this observation the author concluded that the elevation of the portal pressure is not the essential feature of Banti's disease, and an operation like "portal-cava anastomosis" is not an adequate means in this disease. He asserted that the pathogenesis of Banti's disease must be attributed to some other factor, and that the general conditions including splenomegalia and anemia can be improved only by splenectomy.

6. *"Anemia Inducing Toxin" Produced in Banti's Disease*: At the last congress of the Japanese Hematological Society, *Tomoda* reported on the "anemia inducing substance" found in spleens of patients with Banti's disease. Injection of splenic extracts from these patients regularly caused severe anemia in rabbits. He demonstrated how Banti's syndrome is caused by the intoxication of this substance. Then Dr. *Ono* (Dept. of Pathology, Kyushu University Medical School) reported on tissue changes of spleens, which had been found by Dr. *Tomoda* to contain "anemia inducing toxin" the could not find any specific change in those spleens. Some of them showed the typical picture of Banti's disease but others did not show such change.

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