observers failed to find any laws governing these fluctuations, and therefore did not attribute any diagnostic significance to this phenomenon. As any antigen and its corresponding antibody will cause fixation of the complement of the blood, it i evident that the reaction is not specific and could not be used instead of accepted methods for diagnosis. However, if this reaction is used in addition to other tests it gives very valuable information, Thus, for instance, in the cases of syphilis treated with salvarsan. the Wassermann reaction may remain positive, whereas our test gives negative reaction as soon as the antigen disappears from the blood. In cases of gonnorhea of many years standing, we obtained negative reactions, whereas the cases of short duration or with discharge at present gave positive reactions.

Thus, the negative outcome of the test seems to be of great value, especially in the face of positive findings by usual methods. Since the positive outcome of this test may be influenced by many different conditions, we hesitate at present to attribute to it any more value than that of a very promising suggestion. We hope, however, to be able by isolating the antigen from its combination with antibody in the blood, to make also the positive phase of the test of more value in determining the circulation of antigen.

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The new-formation of hemal nodes in the omentum and mesentery of the dog after splenectomy and ligation of the splenic veins. (Preliminary report.)

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The question of the new-formation of splenic or hemolymph-node tissue in the dog after splenectomy has been opened up again by Meyer,[1] who, as the result of the findings of eight dogs examined after splenectomy, at periods of 30, 41, 53, 77, 89, 98, 112 and 126 days after the operation, found no changes in the lymph-nodes, either of the nature of a hyperplasia or regeneration. Doubt was,

[1] *Journal of Experimental Zoölogy*, 1914.

therefore, cast upon the work of preceding investigators, notably that of Tizzoni.

During the years 1910–13 several series of experimental investigations in regard to this point were carried out in my laboratory, with results as yet unpublished. These are now presented here in the form of a preliminary report.

Results of Splenectomy.—Nine dogs were splenectomized and examined as follows: Three one week after the operation; three two weeks after, and three one month after. In no dog was there the slightest change apparent in the lymph-nodes of any part of the body.

Five dogs were splenectomized and examined eight months after the operation. In one dog the lymph-nodes and hemolymph-nodes were larger than they had appeared to be at the time of operation when these nodes were examined as carefully as they could be. No new-formation of hemolymph-nodes was seen.

Five dogs were splenectomized and examined eight and a half months after the operation. No hyperplasia and no new-formation of lymph-nodes was seen.

Five dogs were splenectomized and examined nine and a half months after the operation. In one dog there was distinct enlargement of lymphatic and hemolymph-nodes, but no new-formation.

Results of Ligation of Splenic Veins.—In eight dogs the splenic and gastrosplenic veins were ligated as completely as possible. The animals were examined at periods of one week, two weeks, three weeks, one month, three months, one year, one year and a half, and two years after the operation. These animals were carefully examined at the time of operation for the presence of hemolymph nodes or accessory spleens in the gastrosplenic and great omentum, as well as in the peritoneum and mesentery. No changes in the lymph nodes and no new-formation of hemolymph or splenic tissue was found in the first four dogs. In the dog killed three months after the operation the prevertebral lymph nodes and hemolymph nodes appeared to be slightly enlarged. In the dog examined one year later the prevertebral nodes were much enlarged, but no new formation was noted.

In the dog examined eighteen months after ligation of the

veins the prevertebral hemolymph nodes were very hyperplastic, and the gastro-splenic and great omentums were strewn with small reddish points that microscopically present the appearance of developing hemal nodes. In the dog killed two years after the ligation very remarkable changes were found, the omentums, mesentery and peritoneum in the upper left quadrant were strewn with innumerable red nodes, varying in size from that of a pin-head to that of a pea, and in two cases, as large as a cherry. These large ones had all the gross appearances of accessory spleens; but *they had not been present at the time of the operation.* Microscopically these nodes presented all stages of transition in the development of hemal nodes, from the minute dilated lobule of sinusoidal capillaries in the fat tissue up to the fully developed hemal node resembling an accessory spleen. These nodes were precisely the same as those in the preceding case. In both cases the spleen was atrophic.

Conclusion.—Splenectomy in dogs is not comparable in its effects upon the lymph nodes to the same operation in sheep and goats. In only two out of twenty-four dogs was any hyperplasia of the lymph nodes found, and no new-formation of hemolymph-nodes or splenic tissues.

Ligation of the splenic veins seems to produce much more decided results after the lapse of one or two years following the operation. Three out of eight dogs showed marked hyperplasia of the prevertebral nodes, and the two cases examined after longest intervals showed a new-formation of hemal nodes in the splenic region, the largest newly formed nodes resembling accessory spleens. These structures were not present at the time of the operation.

They are not inflammatory in character.

Individual dogs must have different capacities for hyperplasia and regeneration. The minute capillary plexuses from which these nodes arise may represent preformed accessory spleen anlage.

Tizzoni's statements are hereby confirmed and Meyer's objections negatived.