LYMPHOBLASTOMA OF THE SPLEEN

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Several recently reported cases have stimulated interest in a newly described form of the ever perplexing lymphoblastoma. These cases, the first three of which in this country were reported by Brill, Baehr and Rosenthal under the title of "Generalized Giant Lymph Follicle Hyperplasia of Lymph-nodes and Spleen," are characterized by the presence of lymph follicles of great size. This feature of the disease led the above mentioned authors, who subsequently encountered two additional cases, to suggest the name of splenomegalia lymphatica hyperplastica. Baker reported a similar case and Symmers added three cases. Thus, to date, eight cases have been described including the original report by Becker. The following report is the record of a case encountered by us.

Mrs. A. Q., aged forty-nine, dressmaker, entered the Ellis Hospital Nov. 22, 1923, complaining of general weakness and discomfort in the abdomen. Her family and past history were not remarkable. Her present illness had begun a year before, when she noticed swelling of the glands in both sides of the neck. After a time this had subsided, and she became weak and anemic and lost weight. At the same time she noticed a mass in the left side of the abdomen, which had steadily enlarged, causing her much distress.

On physical examination nothing of moment was observed except pallor, emaciation, and abdominal enlargement. The latter corresponded to a greatly enlarged spleen, extending to the pelvic brim and mid-line of the abdomen. Near the lower end of the mass a notch was distinctly palpable. The liver was not enlarged. The cervical lymph nodes were readily palpable. There was no purpura or bleeding from mucous surfaces.

The urine, yellow in color, contained a slight trace of albumin, a few pus cells, and an occasional hyaline cast. The blood examination showed erythrocytes, 3,000,000; haemoglobin, 60 per cent (S); leucocytes, 6,200; polynuuclears, 65 per cent; lymphocytes, 28 per cent; eosinophiles, 6 per cent; basophiles, 1 per cent. There was slight variation in size and shape of the erythrocytes; there were few microcytes and slight achromia. The platelets were normally abundant. The bleeding time was prolonged; clotting time normal. The Wassermann test was negative.
The temperature was quite irregular, ranging from 99° to 101° F.; the pulse was 90 to 120, and the respirations 20 to 28.

On Nov. 26, 1923, the patient was operated upon by Dr. Albert Grussner and the spleen removed. The description is as follows:

The specimen consists of a spleen measuring 30 × 20 × 10 cm. and weighing 2,880 gm. The surface is dark red and studded with innumerable minute grayish areas, 1 to 3 mm. in diameter, closely resembling enlarged miliary tubercles. Many of these project above the surface, but the vast majority lie beneath the surface and are readily visible.

The anterior margin near the lower pole presents three notches. At the hilum several enlarged lymph nodes are found, which resemble the splenic tissue but are much more pale.

On section, the cut surface appears dark red. The splenic pulp is abundant and studded throughout with closely placed small, grayish, soft nodules that measure 1 to 3 mm. and occasionally 5 mm. in diameter. They tend to project above the cut or torn surface of the spleen and have the appearance of greatly hypertrophied malpighian bodies. Normal lymph nodules are about 0.5 mm. in diameter.

On microscopic examination, marked overgrowth of the lymphoid tissue is noted. The lymph nodules are greatly hypertrophied and in
the mounted section frequently measure 3 mm. in diameter; often more than filling the entire microscopic field as viewed with the low-power objective (Obj. 3, ocular 4B, Leitz). The nodules almost touch one another and are frequently conglomerate. The individual cells of the nodules are large and pale-staining, and resemble lymphoblasts. The nuclei are vesicular, and show little variation in size. Mitotic figures are infrequent. Throughout the lymphoid tissue is a scattering of poly­nuclear neutrophiles and eosinophiles. Fibroblasts and endothelial

cells are prominent in the nodules, which are not divided into germinal centers and outer peripheral portions. No central large artery such as one sees in normal nodules is observed. In some areas the endothelial cells are particularly large and prominent and often contain several large vesicular nuclei.

The splenic pulp is also increased. Fibrosis is absent. The vascular spaces are prominent and engorged. No marked endothelial cell proliferation or unusual blood destruction is found. Cells containing blood pig-

Fig. 2. LYMPHOBLASTOMA OF SPLEEN: PHOTOMICROGRAPH SHOWING LARGE SIZE OF LYMPH NODULES. X 46
ment are very rare. Throughout the pulp pronounced lymphoblastic infiltration, numerous polymorphonuclear neutrophilic leucocytes, and a few eosinophiles are noted. There is very little evidence of phagocytosis. The capsule of the spleen appears normal.

The gross appearance of the spleen was so unusual when first seen that it was thought advisable to make cultures and inoculate animals. Cultures were made of the blood from the splenic vein and of splenic tissue by both aerobic and anaerobic methods, but they remained sterile after prolonged incubation. Guinea-pigs and rabbits were inoculated intraperitoneally with emulsions of the splenic tissue, but after two weeks the animals appeared normal and after a much longer period gave no evidence of disease.

The patient made an excellent recovery from the operation. During the week following the splenectomy the leucocytes increased to 18,600 and soon diminished, but never reached the preoperative level. The appended chart shows the blood changes over a period of several months. The patient left the hospital one month after entrance. She appeared markedly improved. Her temperature, pulse, and respirations were normal. Subsequently we learned that her cervical and axillary lymph nodes enlarged considerably and that she received x-ray treatments outside the hospital. She did not improve and died Nov. 21, 1924, a year after the splenectomy. Necropsy was not obtained.
Fig. 4. Blood Changes in Case of Lymphoblastoma of the Spleen

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REFERENCES


