asbestosis with pleural plaques; 4) tophaceous gout, secondary.

Case 4

An 82-year-old Caucasian newspaper reporter was admitted in January 1969 because of a subtrochanteric fracture of the right femur and hypertension. He had worked as a tile manufacturer for several years until 40 years previously. On several previous admissions following an attack of gout in 1958 polycythemia vera had been diagnosed. The patient developed thrombosis of several digital arteries in 1962, cerebrovascular insufficiency in 1966, epistaxis in January 1967, and upper gastrointestinal bleeding in October 1967. He was treated with phlebotomies and several injections of radioactive phosphorus (^{32}P). In 1964 he underwent segmental resection of the sigmoid for villous adenoma.

Physical examination revealed mild hepatosplenomegaly. The hemoglobin was 12 Gm. per 100 ml., hematocrit 43%, leukocyte count 176,000 with 96% neutrophils and occasional hypersegmented cells. The reticulocytes were 2.4%; platelets, 632,000. Other laboratory tests gave essentially normal results except for elevation of blood uric acid (11.2 mg. per 100 ml.). Roentgenogram of the chest revealed diffuse pulmonary emphysema and fibrosis and slight cardiomegaly. Hip-pinning was performed. The patient died suddenly the following day.

Autopsy findings. The brain contained several small old cystic infarcts in the white matter and diffuse ischemic nerve cell change. The lungs were grossly emphysematous and showed patchy interstitial fibrosis histologically. Numerous megakaryocytes were impacted within the pulmonary capillaries. Occasional asbestos bodies were observed in the wet preparation of ground ‡ lung tissue. The parietal pleura of the posterior thoracic wall and diaphragm contained several large white hyaline plaques. The heart weighed 450 Gm. and the left ventricle was moderately hypertrophied. The liver weighed 1,400 Gm.; microscopic examination disclosed centrilobular necrosis and a few megakaryocytes within its sinusoids. The spleen weighed 800 Gm. and contained a firm, red-brown, well-circumscribed nodule 4 cm. in diameter. Histologic examination proved this to be a hamartoma characterized by thick Billroth cords with relatively few trabeculae and no lymphoid follicles. The remaining splenic tissue contained scattered small foci of extramedullary hematopoiesis composed largely of erythroid and myeloid precursors accompanied by a few hyperchromatic megakaryocytes within the sinusoids, fibroblastic proliferation, and enormous numbers of lipid-laden histiocytes in the red pulp. The lymphoid follicles were reduced in number and size. Numerous large collections of completely mature granulocytes were found in some fields. The vertebral bone marrow was hypercellular with a fat-to-marrow ratio of 1:9 and contained myeloid hyperplasia with a myeloid–erythroid ratio of 6–8:1 and increased numbers of basophilic and eosinophilic granulocytes and their precursors. Large numbers of megakaryocytes, many of which were immature and atypical, were found. Examination of the blood vessels disclosed subintimal and adventitial fibrosis.

Final diagnoses: 1) a myeloproliferative disorder, manifested predominantly as polycythemia vera with pronounced hyperleukocytosis; 2) pronounced lipoid histiocytosis of the spleen, possibly secondary to platelet phagocytosis; 3) hamartoma of the spleen; 4) pulmonary asbestosis with pleural plaque formation; 5) multiple small old cystic infarcts of the cerebrum; 6) moderate left ventricular hypertrophy; 7) segmental resection of colon for villous adenoma, remote.

Case 5

A 72-year-old Caucasian woman with a two-year history of diabetes mellitus was admitted in 1968 for elective removal of a cataract of the right eye. She had worked from 1924 to 1942 as a pipe coverer in an asbestos plant. On physical examination mild hepatosplenomegaly was found. The patient's serum was extremely viscous with a positive Sia test, total protein 9.5 Gm. per 100 ml., albumin 2.3 Gm. per 100 ml. Ultracentrifugation of serum protein showed an elevation of 19S macroglobulin to 0.7 Gm. per 100 ml. (9.3% of total), atypical macroglobulin, class S 9.7 in the amount of 1.9 Gm. per 100 ml. (25.3% of total), normal 7S globulins, and reduced albumin. Immunoelectrophoretic analysis showed a paraprotein in the gamma-A fraction, decreased gamma-M fraction, and normal gamma-G, beta-1C, alpha-2 globulin, beta lipoprotein, and albumin. The hemoglobin was 11.4 Gm. per 100 ml., hematocrit 34%, leukocyte count 7,500 with 56 neutrophils, 37 lymphocytes, 1 eosinophil, 6 monocytes. Platelet count was 125,000; reticulocytes 1.6%; sedimentation rate 4 mm. per hr. Bone marrow examination revealed rouleau formation and atypical lymphocytic and plasmacytoid infiltrate consistent with Waldenström's macroglobulinemia. Skeletal roentgenographic studies showed diffuse osteoporosis. There were no punched-out lesions.

‡ Waring Blender × 30 sec.