

ounds. The hemoglobin was 10 Gm. per 100 ml., hematocrit 32%, leukocyte count 5,400 with a normal differential. The sedimentation rate was 28 mm. per hr. Urinalysis revealed moderate proteinuria and pyuria. Other laboratory tests disclosed no abnormalities.

Roentgenogram of the chest showed atelectasis of the right middle lobe and base of the right upper lobe. Bronchoscopy revealed a tumor at the orifice of the right-upper-lobe bronchus. Biopsy disclosed highly anaplastic epidermoid carcinoma. The tumor was regarded as inoperable. The patient died four months after admission.

Autopsy findings. The parietal pleura contained numerous hyaline plaques bilaterally. There was a fist-size tumor in the area of the hilus of the right lung, causing partial obstruction of the right main bronchus. Histologic study confirmed the biopsy findings of a highly anaplastic epidermoid carcinoma. Disseminated fibrosis containing asbestos bodies was found in the pulmonary tissue. The right ventricle was hypertrophied. The liver weighed 1,270 Gm. Microscopically, the portal fields were found to contain diffuse plasma-cell infiltration. The spleen weighed 100 Gm. Microscopically, the splenic trabeculae and blood vessels were found to be infiltrated diffusely by large numbers of plasma cells. Much hemosiderosis was present. Both adrenals contained scattered nodules of metastatic carcinoma. The kidneys appeared unremarkable grossly. Microscopic examination disclosed dense deposits of plasma cells within the stroma and hyaline alteration of the media of veins, suggestive of amyloid. The bone marrow was partially replaced by compact homogeneous infiltrations of plasma cells.

Final diagnoses: 1) anaplastic epidermoid carcinoma of the right main bronchus with metastases to both adrenal glands; 2) plasma-cell myelomatosis with diffuse infiltration of bone marrow, liver, spleen and kidneys*; 3) pulmonary asbestosis with pleural plaque formation; 4) hypertrophy of the right ventricle of the heart.

Case 3

A 58-year-old Caucasian, male, bank clerk had a history of gouty arthritis, proved histologically in 1962. In 1965 he was admitted to the hospital because of progressive mental confusion, severe left temporal headache, and attacks of syncope. The liver was palpable 10 cm. below

the costal margin. Neurologic examination showed right hemiparesis. Laboratory tests gave essentially normal results except for elevated blood uric acid (11 mg. per 100 ml.) and a weakly positive Latex test for rheumatoid factor. A brain tumor was suspected and proved by cerebral arteriography. Craniotomy was performed and a hemorrhagic, partly-necrotic tumor was excised from the left frontal lobe. Microscopic examination indicated a poorly-differentiated microglioma (reticulum-cell sarcoma). Eight days postoperatively the patient died.

Autopsy findings. Remnants of the left frontal lobe of the cerebrum contained an infiltrating tumor composed of medium-sized cells with large round, oval, or lobulated, hyperchromatic nuclei, occasionally having giant-cell characteristics, and minimal cytoplasm. The neoplastic cells were clustered most densely about blood vessels. The adrenal glands were markedly enlarged, weighing 36 and 42 Gm., and the cells in them had been almost totally replaced by tumor cells identical to those in the brain, which had infiltrated freely into the surrounding adipose tissue. The liver weighed 2,560 Gm., showing on section pale brown-tan parenchyma with somewhat obscured lobular architecture. Histologic examination disclosed extensive infiltration of the portal fields and adjacent parenchyma by proliferating myeloblasts, myelocytes, granulocytes, plasma cells, and lymphocytes. The spleen weighed 1,140 Gm., and contained hyperplasia of the reticulum framework and widespread myeloid metaplasia including megakaryocytes and myeloblasts. The endothelium of the large veins had been replaced by leukemic cells. The vertebral bone marrow was hypercellular, with a cell-fat ratio of approximately 5:1, and contained an abundance of large atypical megakaryocytes and many primitive cells resembling myeloblasts. There were scattered areas of early fibrosis. Examination of the lungs showed severe chronic bronchitis and patchy interstitial fibrosis containing occasional asbestos bodies accompanied by much anthracotic pigment. The leaves of the diaphragm and the parietal surfaces of both pleural cavities posteriorly were covered with extremely hard, gray-white plaques of avascular hyaline scar tissue.

Final diagnoses: 1) a myeloproliferative disorder involving the liver, spleen, and bone marrow†; 2) reticulum-cell sarcoma with massive involvement of the brain and adrenals†; 3)

* Confirmed by S. E. Moolten, M.D., New Brunswick, N. J.

† Confirmed by AFIP, kindness of Dr. Bruce H. Smith (Captain USN).