

autopsy. The histological examination of the liver and spleen may provide definite proof of the existence of a leukemic process in cases of acute myeloblastic leukemia. In this disease these organs are not enlarged, but contain leukemic infiltrations, which are absent when the immature leukemoid blood reaction is caused by a septicemia or represents an acute traumatic phenomenon.

No evidence exists incriminating a nonspecific chemical trauma, such as exerted by exposure to war gases (chlorine, mustard, phosgene, and arsine), and the development of a leukemia (Gilchrist and Matz). No residual evidence of chronic myeloid or lymphoid leukemia was recorded from the 70,752 American soldiers reported to have suffered from gas poisoning during the late war.

*Aleukemia.* One of the main difficulties encountered in establishing definite correlations between trauma and leukemia is the fact that a chronic leukemia has a symptomatically silent preparatory stage which may last for several years. No information is available in regard to the developmental period at which definite leukemic changes, diagnostically important, become manifest in the blood. From the evidence at hand it must be assumed that the presence of such hematic deviations designates a rather late stage of the disease. It is obvious that the above difficulties will be multiplied in the case of an aleukemia, where a normal or subnormal number of leucocytes (leukopenia), containing immature and pathological cell forms, is found. The diagnostic uncertainty associated with this blood dyscrasia is probably the main reason that the literature contains only a few cases of aleukemia for which an etiologic relation with trauma is claimed (Döllner; and Kaltenschnee). In some instances of traumatic leukemia a primarily aleukemic condition may have been transformed by the action of a traumatic stimulus into a leukemia, a change which occasionally occurs spontaneously.

Döllner recorded a case involving an individual (male), who received a perforating gunshot wound (during the war, 1915) through the liver, causing a tear of the gall bladder. After recovery from the injury he did not attain his former good health, and six years later an enlarged spleen was found. The blood examination showed a moderate anemia and a mild leukopenia (5,500 leucocytes) with neutrophilia and immature myeloid cell forms. The diagnosis of an aleukemia was made and Döllner argued, in the ensuing litigation, that the dyscrasia developed after the injury, since an enlarged spleen had been absent apparently at the abdominal operation undertaken at the time of the war injury. The case was adjudged as compensable based on Döllner's reasoning, that the war wound of the liver had produced a disturbance of the hematic equilibrium normally existing between the liver and the spleen, thus causing the aleukemia. The decision appears to be justified from a medico-legal standpoint in view of the chronic character of the changes set up by the liver injury and its relation to the spleen.

*Myeloma, Chloroma, and Reticular Cell Sarcoma of Bone.* Myeloma,