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THE ETIOLOGY OF PERNICIOUS AND RELATED MACROCYTIC ANEMIAS*

By Dr. WILLIAM B. CASTLE
BOSTON, MASS.

THE student of dietary deficiency disorders is usually concerned with the relationship of defects in the composition of the diet to such diseases. There is, however, evidence that nutritional disturbances may be complicated or actually induced by the presence of sufficient pathological changes in the alimentary tract to interfere with the digestion or assimilation of food adequate for the normal individual. As a result of observations carried out during the past eight years, it is our belief that Addisonian pernicious anemia and certain related macrocytic anemias present examples of such a process and afford an opportunity for the study of a somewhat specialized

mechanism which is apparently responsible for the prevention of such anemias in the normal individual. The concept of these anemias as in many instances manifestations of "conditioned" deficiency disease has been developed through studies made in association at various times with Dr. Wilmot C. Townsend, Dr. Clark W. Heath, Dr. Maurice B. Strauss, Dr. Herman A. Lawson and Dr. C. P. Rhoads. Dr. Strauss has been especially concerned with the problems of the macrocytic anemia of pregnancy; and Dr. Rhoads has since made notable contributions to the understanding of the macrocytic anemias, especially of sprue. If the results of the observations, which are summarized below, seem lacking in detail, it is largely because studies carried out in man must be made as opportunity is afforded by the clinical material. On the other hand, in animal experiments there is

* Read before the Harvey Society on October 18, 1934. From the Thorndike Memorial Laboratory, Second and Fourth Medical Services (Harvard), Boston City Hospital, and the Department of Medicine, Harvard University Medical School, Boston, Mass.

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