

can be determined by a microscopical examination of the blood, but even this statement requires still a considerable degree of observation, prior to a satisfactory solution of the entire problem. According to Bramwell (*Med. Times*, Sep. 22, 1877) in ordinary cases of anemia of sufficiently long duration, alterations of an analogous character, have been observed in the blood. Dr. Osler, of Montreal, has also noted the very small corpuscles upon which so much stress is placed, even in healthy blood. Their numerous presence, however, he favors, as likely connected with pernicious progressive anemia. In tracing the first ray of light, which attracted attention in this peculiar condition, appears according to M. Lapine, to be a case recorded by Andral in his *Medical Clinique*, 1823. It is considered, that owing to the imperfect report, it may have been a case of Bright's Disease. Then follow two cases, reported by Barclay in the *Medical Times*, 1851, described as death from anemia. Strange it is, that Dr. Addison, of Guy's, who so distinguished himself in kidney disease, should have been the first to give force and character to his impressions on this particular form of *Anemia* as *idiopathic*, and so graphically revived by Professor Biermer, of Zurich, as "progressive pernicious anemia." See report, by Drs. Bell and Osler, (*Transactions Canada Medical Associations*.) In 1857, Dr. Wilks published (in *Guy's Hospital Reports*) nine cases of fatal anemia. In 1863, Dr. Habershon, of London, published a case in the *Lancet*, of a like character. Various other reports of cases in British and foreign journals, amount to about 46 in number. More recently appeared, the paper of Dr. Howard, of Montreal, in the transactions of the American Medical Association, at Philadelphia; also the admirable report of Drs. Bell & Osler, on the same disease. It appears to be connected with the pregnant condition; loss of blood; even moderate in character; and slight continuous diarrhoea. The usual anatomical lesions found after death are those incident to anæmia, but in addition, fatty degeneration, defined by Addison as remarkable persistence of fat, in spite of weakness and pallor. This condition has been more particularly noted by Lapine, in connection with the heart. Recent experiments lead to the belief that even fatty degeneration may (through ruptured and weakened vessels) bring about the

ecchymoses of the retina, which have been observed. The presence of "microcytes" in a well defined case of *splenic leukaemia*, and their absence in several well defined cases of pernicious anæmia, throws some degree of doubt on accuracy of diagnosis, from this point alone. In conjunction with these microcytes, nucleated red corpuscles have been found in the blood. The cytogenic function of red marrow, as defined first by Bizzozzi and Neuman—has given rise to considerable enquiry—but the results so far are not quite satisfactory. Dr. Pepper, of the University of Pennsylvania, has described certain abnormal appearances in the marrow, on which he bases a theory as to the causation of this disease. He considers the anemia of Addison or Biermer, merely as "the medullary form of pseudo-leukæmia." Thus we observe there is considerable diversity of opinion, even on the pathological appearances of this peculiar disease. Recently, he has endeavored to trace a connection between Addison's disease and chronic wasting, in which there are well-defined evidences of anæmia. These he has classed as anæmatoses, contrary to the opinion of Dr. Greenhow, who considers that the blood does not undergo much change in uncomplicated cases of Addison's disease. Dr. Howard, of Montreal, in his admirable paper, gives the following among his conclusions, that neither the spleen, nor the lymphatic glands usually present any, much less any special lesion, in pernicious anæmia. That it remains to be proved that hyperplasia, or other change of the bone marrow is a cause of anæmia. How interesting becomes the fact, as to the remarkable similarity between leucocythæmia in its results, and well defined anæmia. In this particular also, arises a marked link of connection in Hodgkin's disease, the anæmia of which is distinguished from the progressive pernicious, by the marked lymphatic glandular enlargement. I have only briefly touched upon some interesting features of this disease, which is now occupying the close observation of able physiologists and pathologists, and from the diversity of opinion, so far expressed, we may well acknowledge the accuracy of the remarks of Professor Quincke, (*Med. Times & Gazette*, Oct. 14th, 1876): "We have not to deal with a single diseased condition. Pernicious anæmia—like anæmia, in general, is the product of extremely various morbid processes,