

few years in the examination of the blood as a means of diagnosis of acute diseases; this study has only been made, however, by chemical procedures, and there is still wanting a practical method for exact diagnosis. There is in general pathology a vast field for what may be called the "Semeiology of the blood as regards the prognosis and diagnosis of diseases." Microscopic examination of the blood is difficult, on account of the excessive vulnerability of its elements; desiccation and evaporation change their form, and interfere with their examination.

Hayem has made an instrument which, notwithstanding its simplicity, has not been used by physicians, though he has used it for two years. He has made a small central disk in a plate of glass, by hollowing out a circular trench three millimetres in diameter. After having plastered vaseline on the part of the plate immediately outside of the trench, a drop of blood is placed on the disk and a small plate is placed over it and fixed. The drop of blood spreads uniformly under the plate and makes a layer of some thickness under the little disk, completely protected from evaporation and from the air. After having acquired a certain skill in this method, one makes all the preparations alike. This procedure has an immense advantage in showing the blood as it is in the vessels; the process of coagulation may be studied with the microscope, and the quantity of fibrin in the blood is easily appreciated. When normal blood is examined in this way it seems to contain only a very few and very short filaments of fibrin; in pathological cases it contains a thick fibrinous reticulum under certain circumstances. The amount of fibrin may be measured from the beginning to the end of a disease. Take, for example, an acute febrile disease, at its onset; at this time the diagnosis is difficult, but if there is not an abundant reticulum of fibrin one may almost certainly diagnose a pyrexial disease. This method is very useful in facilitating the diagnosis in difficult cases, as, for example, certain anomalous forms of intermittent fever. Suppose now that a patient gives general evidences of pyrexia at the beginning; if there is no fibrinous reticulum, the case is almost certainly one of typhoid fever; if the reticulum is thick typhoid fever may be thrown out of the diagnosis, as may such inflammatory complications as pneumonia or pleurisy. There is an affection which so closely resembles typhoid fever that it is often mistaken for it; mucous fever, gastric fever, or inflammatory fever, as it is called. In these cases there is a constant increase in the amount of fibrin in the blood, contrary to what is seen in typhoid fever. There are a certain number of exceptions; some of the inflammatory diseases of the phlegmasiæ are not attended by an increase in the amount of fibrin. Such are certain forms of pneumonia, as what has been called typhoid pneumonia, pneumo-typhus. If there is a slight reticulum of fibrin, somewhat greater than the normal, it is no longer a typhoid pneumonia, but a tuberculous pneumonia, a caseous lobar pneumonia. The phlegmasiæ, the types of which are gout, rheumatism, and frank pneumonia, may be always recognized by their augmentation of fibrin, even in the apyretic forms of gout and rheumatism.—*Revue Méd. Franç. et Étrang.*, Nov. 1, 1884.

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Pernicious Anæmia in a Child Five Years Old.

Dr. ADOLPHE KJELLBERG opens a paper in which he gives the history of this case, by stating that pernicious anæmia is of greater extent than was believed at the time when Biermer called attention to it by his description of the disease; that it is chiefly seen at mature age; that it runs even up to the period of old age; but that, so far as childhood is concerned, only one case has been thus far reported—that of a child 11 years old, by Quincke. After having mentioned the

principal symptoms of this case, Kjellberg gives the history of a case which came under his own care, the patient being only 5 years of age. It was especially remarkable for its rapid course, and very characteristic symptoms, such as discoloration of the skin, which became of a yellowish waxy color, pallor of the lips, great prostration, asthma on the least exertion, palpitations, intense anæmic bruit, retinal hemorrhages, watery-looking blood, and reduction of the number of red disks to 0.571 million per cubic millimetre. The *post-mortem* appearances were also very characteristic; extensive fatty degeneration of muscular structure of the heart, excessive pallor of the cerebral substance, hemorrhages of the cerebellum, pericardium, pleura, lungs, and peritoneum, and fatty degeneration of the epithelium of the renal tubules.

From the knowledge gained from Quinke's case and his own, Kjellberg concludes that pernicious anæmia presents the same symptomatology in childhood as in adult life.

This case throws but little light on the etiology of pernicious anæmia; and gives no ground for the hypothesis that this disease is the result of a life of privation and of insufficient nutrition, for this child was in comparatively good circumstances. Kjellberg is rather inclined to indorse the opinion of Warfringe that pernicious anæmia should be considered as an infectious disease. His patient was put on arsenic, with nourishing food, but with no noticeable result.—*Nordiskt Medicinskt Arkiv*, Bd. xvi. Hft. 13.

The Nature of Fever, and the Cold-Water Treatment of Fever.

B. NAUNYN has recently contributed an article on this subject to the *Archiv für Experim. Pathol. und Pharmacie*, Bd. xviii., Hft. 1 u. 2. In this article he calls especial attention to the experiments of Liebermeister and Jürgensen, which, in spite of their one-sided character, have received very general recognition. Naunyn draws a sharp line of separation in fever as to the danger of increased temperature, and the severity of the disease causing it, of which fever is only a symptom. He has experimentally studied the dangers of over-heating the organism, where there is no general disease, by placing rabbits in a specially constructed apparatus. The result of these experiments was that completely healthy normal rabbits bore a temperature of 107.6° Fahr. for from one day to one week, and for the most part without injury; but that a temperature of 108.5° or 109.4° Fahr. was dangerous and fatal. He leaves out of his discussion, insolation and intense hyperpyrexia, for which he advises prompt treatment with cold water.

In discussing the febrile diseases, pneumonia, typhoid fever, relapsing fever, scarlatina, etc., he concludes that the high temperature is absolutely of no moment as an element of danger. A very clear example is seen in relapsing fever in which, as is well known, high temperature is the rule, reaching a degree seldom seen in other diseases, and which may persist for a long time without injury to the patient, but not usually considered dangerous by physicians. So also in typhoid fever in which low temperatures are observed (seldom over 102.2° Fahr.), but which are accompanied by severe general disturbances, the patient recovering more slowly and with more difficulty than from cases which are similar except as regards the presence of higher temperature. The same is seen in other acute febrile diseases. Naunyn thinks, therefore, that observations as to the temperature in febrile diseases are of more importance as a rule than of any other single symptom, especially since we have no such certain means of measuring other symptoms as by the thermometer in abnormal temperature.

Naunyn cannot regard Liebermeister's definition of temperature as correct.