fected. Extensive changes in the kidney are much more serious than those of the liver or spleen, as they lead to death within a few weeks or months.

PROGNOSIS.—This is in general unfavorable. It is probable that amyloid, when once formed, is not removed from the site of deposit. In all cases in which the condition is so marked that the diagnosis is certain, death usually occurs within short periods. Temporary improvement may take place; and in some cases, especially after operation for chronic purulent conditions of bone, the disease apparently comes to a standstill, marked general improvement takes place, the liver swelling decreases, and the albuminuria disappears. It is, of course, impossible to say to what extent these symptoms were due to the amyloid disease. A similar improvement has been noticed as the result of a prolonged inunction cure in a case of amyloid associated with syphilis. Corneal tumors may slowly disappear under the influence of local irritation and inflammation.

TREATMENT.—For the well-established condition it is hardly probable that treatment will avail, though iodine, ammonium chloride, potassium iodide, dilute nitric acid, etc., have been recommended. The improvement of the local or general primary condition is, of course, the most important therapeutic line to be followed; and in connection with this the general improvement of nutrition. Of far greater importance are prophylactic measures, even to the extent of such radical procedures as amputation in cases of chronic varicose ulcerations, chronic suppuration of bones, etc., in which persistent operative and therapeutic measures have been without result. *Aldred Scott Warthin.*

ANABOLISM. See *Metabolism.*

ANACARDIACEÆ, or **TEREBINTHINACEÆ.**—(The Cashew family.) A remarkable and important family of some fifty-nine genera, chiefly tropical or subtropical, exceedingly varied in the nature of its products. The mango, the cashew, and the spondias or hog-plum, are important fruits; those of Pistacia furnish a well-known flavoring agent, while its bark yields the commercial resin mastic; the milk juice of several Japanese species of Rhus furnishes Japanese lacquer, and the leaves and fruits of other species of this genus yield tanning agents. The oil which abounds in several species of Rhus (more properly called *Toxicodendron*), and in some other genera, acts as a powerful cutaneous poison. (See *Poisonous Plants.*) *H. H. Rusby.*

ANÆMIA, PERNICIOUS.—(Synonyms: *Progressive perniziöse Anämie,* Biermer; *Idiopathic anæmia,* Addison; *Essentielle Anämie,* Lebert; *Essentielle maligne* or *Essentielle fébrile Anämie,* Immermann; *Perniziöse Anämie,* Quincke; *Anémie progressive,* Lepine.)

DEFINITION.—Pernicious anæmia is a grave form of anæmia which is characterized by a reduction in the total amount of the blood and by a change in its physical, anatomical, and chemical characters. The blood is thin and pale and not coagulable. The red corpuscles are lessened in number and changed in size and shape. It is a peculiar circumstance that the adipose tissue is generally maintained, while at the same time secondary fatty degeneration of the heart is almost always found to be present. The disease is distinguished, clinically, by the symptoms of grave anæmia, often by an irregular fever, retinal hemorrhages, and hemorrhages underneath the skin and from mucous membranes. Its course is usually progressive, its termination fatal, its duration from seven weeks to from two to three years. Complications are rare; death is due to exhaustion, to syncope, to œdema of the lungs, or to cerebral complications.

This symptom complex may be dependent on some evident anatomical change or it may have no demonstrable organic basis. Thus we distinguish secondary or symptomatic progressive pernicious anæmia and a primary, essential, or cryptogenic form. Some authors limit the term pernicious anæmia to the latter group, but it seems better, in view of the identity of the two conditions anatomically and clinically, to apply the term to that peculiar form of anæmia which possesses the characteristics enumerated above, whatever its cause may be. In the secondary form of pernicious anæmia the symptoms of the blood changes dominate the clinical picture so that the symptoms referable to the causal lesion are comparatively insignificant, and the anæmia becomes practically a disease *per se.* This characteristic marks the distinction between pernicious anæmia and simple chronic anæmia in which the symptoms of the primary disease hold the first place, although the anæmia may be severe.

HISTORY PREVIOUS TO 1872.—The publication by Biermer, in 1872, of a series of cases of this disease, and his assertion that he was the first to recognize it, aroused the latent energies of the English, so that since then they have justly and successfully shown that to one of their countrymen is due the credit of having identified it long before that time. Addison certainly had observed and taught the clinical course of the disease, and had made inquiries into its pathology. He clearly established that what he called idiopathic anæmia was an independent affection, and so impressed it upon his colaborers and students that ever since then it "has not been lost sight of at Guy's." The wards of that hospital have furnished most of the cases for English memoirs, and its reports contain many observations and discussions on this disease. Prior to Addison, Coombe, Marshall Hall, and Barclay reported isolated cases of fatal anæmia. Since then, and before Biermer's publication, Wilks, Bristowe, Leared, and Habershon made contributions to our knowledge of the disease. The labors of Taylor, of Pye-Smith, of Mackenzie, and of others have clearly proven the fact of English priority. Professor Eichhorst, in his elaborate monograph, admits these claims, while Pepper, in the United States, was one of the earliest to point out the credit due Addison. In the mean time, the French, through Lepine, presented their claims of priority in the early recognition of the disease. Lepine justly admits the valuable work of Addison and his followers, but says that Andral was the earliest observer, and that Piorry, Cazenave, and Perroud had recognized the affection, the latter detailing four cases, with autopsies. A dissenting voice arose among the Germans. Lebert claimed that he had, in separate papers, described this disease, but the evidence from them shows that he had confused chlorosis with pernicious anæmia. Lately, it has been found that American physicians can enter claims of priority for one of their countrymen. Channing described cases of fatal anæmia in connection with, and independent of pregnancy as early as 1832. Not only was he himself perfectly familiar with it, but so also were many of his associates.

HISTORY SINCE 1872.—The time of the publication of Biermer's essay on "Progressive Pernicious Anæmia" makes an epoch in the history of this strange disease. He not only embodied in his essay as faithful a portrayal of the disease, as Addison and others had done, but he added to it more accurate accounts of the blood changes and the occurrence of retinal hemorrhages. Moreover, he so impressed the medical world with the important results of his observations that since then the knowledge of the disease, instead of being confined mostly to England, has become universal, and multitudes of observations have been in a short time added to the previous comparatively scanty data. In 1874 Immermann, in 1875 Zenker, and in 1876 Quincke, made valuable contributions to the study of the disease, while in 1877 important and elaborate monographs, by Müller and Eichhorst respectively, appeared. Since then German literature has been rich in observations of isolated cases. Among Englishmen, Pye-Smith, in 1875, published two cases in the *Deutsches Archiv,* and since then, among others of his countrymen, Bramwell, Mackenzie, Finney, Coupland, and William Hunter have written interesting and important articles. In America, Pepper, Howard,