

which is replaced by alcohol of rising concentration for twelve hours. They are then cleared in carbol xylol and mounted in Canada-balsam.

HAMILTON C. MARR.

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## 2. Ætiology of Insanity.

*The Statistics, Ætiology, Symptoms and Pathology of General Paralysis* [Beiträge zur Statistik, Ætiologie, Symptomologie und Pathologischen Anatomie der progressiven Paralyse]. (*Arch. f. Psychiat.*, Bd. 44, H. 1-3.) Junius, P., and Arndt, M.

Although these papers fill 147 pages and contain many details and laborious statistics, they add little to what is already known about this disease. It seems to be now the received opinion that there is a causal sequence between syphilis and general paralysis, but as the one is a very common disease and the other a very rare one, there must be some intermediate nexus which we cannot explain. One of the mysterious circumstances of the incidence of the disease is the length of time which elapses between the luetic infection and the appearance of the paralysis. Junius and Arndt found that the shortest time was three years; the longest time was thirty-five years. In the first decennium after the infection, 85 became paralytic; in the second, 198; in the third, 54; and in the first half of the fourth decennium 5 cases were affected. There seems no evidence that treatment with mercury has any especial influence in bringing on the paralysis; on the contrary, there is reason to believe that a careful mercurial treatment of syphilis acts as a security against the outbreak of the paralysis.

Strümpell and Möbius have conjectured that there must be a chemical change or ferment in the blood. Kraepelin holds that, at the basis of the paralysis, there is a pervading injury to the functions of nutrition, of which the affection of the brain is the most striking and important but by no means the only manifestation. He points out the lesions in different parts of the body, the degeneration of the heart, arteries, kidneys, and bones, and the changes in the bodily weight and temperature in support of his views.

Some pathologists, like Naecke, hold that, not only is there a specific cause for general paralysis, *i.e.*, syphilis, but that there is also predisposition of the brain to yield in this particular way to the attacks of syphilis, so that one is born, as it were, predestinated to general paralysis. The authors do not dispute the influence of a hereditary taint in some forms of insanity, as in manic-depression and paranoia, but these differ widely from general paralysis in their origin. They are endogenous, one may say constitutional, insanities, which have their roots in the whole personality, form with its growth, and last long. On the other hand, general paralysis in the great majority of instances attacks persons previously sound of mind, mostly between the ages of thirty-five and fifty years, and exhibits the symptoms of an organic progressive disease of the brain which after a few years almost always ends in death.

WILLIAM W. IRELAND.

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