Epitome of Current Literature.

1. Neurology.

Bielschowsky's Method of Silver Impregnation of the Neuro-fibrils [*Die Silberimprägnation der Neurofibrillen nach Bielschowsky*]. (*Neur. Cbl.*, 1908, *Nr.* 19.) *Schütz.*

The two methods of colouring and impregnating which of recent years have enabled us to see with clearness the intra- and extra-cellular neuro-fibrils, whether they be medullated or non-medullated, are those of Cajal and Bielschowsky. There are upholders of both these methods, and which of the two is the better is not here discussed. Dr. Schütz, who has made use of Bielschowsky's silver impregnation method, although he kept rigidly to the prescribed lines, was at first not quite successful. He soon discovered that the fault lay, not in the method, which is all that could be desired, but in the times of the different processes being of too short duration, and after following the undernoted prescription he has had very good results.

(1) The sections used are only frozen sections, which are very easily prepared with the help of the carbonic acid microtome, of 5–10 μ in thickness. The piece taken from the brain for this purpose, and hardened with 10 *per cent.* formalin (Schering), may be large, and before the sections are made it should stand in water for one to one and a half hours. The sections themselves are placed in aqua dest. for two to three hours.

(2) The sections are placed for twenty-four hours in a 2 *per cent.* solution of silver nitrate (Merk-Darmstadt).

(3) Before the sections are placed in the ammonia silver salt solution prescribed by Bielschowsky, they should again be placed in aqua dest. for twenty-four hours. They may be left in the ammonia silver solution for thirty to forty minutes.

(4) After putting them quickly through distilled water, the sections are placed for twenty-four hours in 20 *per cent.* formol solution, which may be made with rain-water. Schering's formalin, made up to the given strength, has produced good results.

(5) In order to make lasting preparations the sections are placed for ten minutes in frozen vinegar water (10 c.cm. water to 2 gtt. frozen vinegar), and then for thirty to thirty-five minutes in a solution of 10 c.cm. aqua dest., to which three drops of a 1 *per cent.* gold chloride solution has been added. The sections then become greyish-black. A reddish-violet colour, as required by Bielschowsky, has never been procured by Dr. Schütz.

(6) In order to clear away the insufficiently reduced silver, the sections are placed for three to five minutes in a 5 *per cent.* solution of sodium hyposulphite, to which a few drops of a concentrated acid solution of sulphuric acid sodium has been added (to 10 c.cm. hyposulphite of sodium, 1 drop of acid sulphate of sodium).

(7) The sections are washed in aqua dest. for twenty-four hours,

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

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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 Paralysie]. (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.

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