

substance of the cells in the various parts of the nervous system; slight fatty degeneration of the epithelial cells in the liver and kidney, and with a certain amount of increase in the nuclei of the vessel walls. These changes may be taken as the basis of the condition, being common to all. In cases of delirium tremens these do not differ in any marked characteristic from cases with the common symptoms of marked mental confusion. From the anatomical point of view there is a difference in certain cases with motor signs or with hallucinations of sight, of alterations in the cells of origin of the pyramidal tract from "reaction at a distance."

As regards the origin of the toxic substances, pathological anatomy is not yet sufficiently advanced. There must be a lessening of resistance of the nervous system of those affected, probably of a hereditary character. In alcoholics, for example, some such difference may determine whether their symptoms shall consist of delirium tremens, or one of the psychoses, or some other disease. Similar considerations probably act in all cases of chronic intoxication. Even in the cases developing in convalescence from acute infective conditions, altered processes of "assimilation" may be advanced.

A third group consists of true febrile delirium, either manifested during the course of a septicæmia or the so-called cases of absorption in which the septicæmia had passed off.

In the last group of cases, no evident etiological factor is present. Bianchi and Peccenino have stated the existence of a specific bacillus. Philipppers considers cases of shock as cases of intoxication, caused by alterations in the metabolism produced by the influence of the nervous action. In some of these forms of psychosis a similar origin may exist; it may be by a psychic or nervous injury causing sudden alterations in the metabolism. We are able to draw the conclusion that pathological anatomy does not clear up the pathogenesis of many cases; the acute confusional psychoses have a common symptomatology and anatomical lesions, probably all caused by chemical alterations which may depend upon very varied causes.

J. R. GILMOUR.

On the State of the Cerebro-spinal Fluids in General Paralysis [Ueber das Verhalten der Cerebro-spinal Flüssigkeit bei Dementia Paralytica, etc.]. (Allgem. Zeits. für Psychiat., Bd. lix, H. 1.)

The author recalls that since Quinke, in 1891, directed the attention of the Wiesbaden Congress to the use of lumbar puncture, numerous publications have appeared on the subject. He observes that the high expectations of the therapeutic value of this operation have not been realised, any improvement following being seldom lasting. It has been used with most effect in acute, serous, and sero-purulent meningitis, and less so in simple hydrocephalus, brain tumour, and tubercular meningitis. Lumbar puncture has, however, been an important addition to our means of diagnosis. Through it we are able to ascertain whether there is abnormal increase in the spinal fluid. This gives an important indication in cases of brain tumours and of serous meningitis with obscure symptoms. In doubtful cases of tubercular meningitis the

detection of tubercle bacilli in the spinal fluid determines the diagnosis of the disease.

Quinke gives the pressure of the spinal fluid taken lying on the side as 40—70 mm. ; Riecken, 40—60 mm. ; Bergmann, 40—130 mm. ; Gumprecht, 40—100 mm. The height notably increased on sitting up. Any pressure above 150 may be put down as pathological. In acute serous meningitis and in tumours of the brain a pressure up to 700 has been noted. With due aseptic precautions the operation of puncture is quite safe.

Dr. Schaefer made fifty-three punctures in twenty-five cases of general paralysis, and found an average pressure of 182 mm. ; in two thirds of the cases the pressure was between 250 and 280. In the fourteen general paralytics in which spinal puncture was practised by Turner, the pressure lay between 70 and 320 mm., while in fourteen cases of paralytic women in the supine posture the mean pressure was found by Nawratski and Arndt to be 113 mm.

Dr. Schaefer considers that the increased amount of fluid in the brain and spinal cord of general paralytics is owing both to the wasting of the nervous tissues and to the fluid exuded from the inflamed membranes. Dr. Schaefer found the rate of pressure to remain high after repeated punctures. He never allowed fluid to pass to reduce the height below 40 mm. The pressure in tabes dorsalis was as high as in general paralysis.

Dr. Schaefer had a bad case of chronic epilepsy. There was stupor with clonic spasms in some muscles. Assuming that there was pressure of fluid in the occipital region of the cranium, he tried to relieve it by a puncture in the spinal region, when the clonic spasms promptly ceased and the stupor diminished. He found that the pressure in epileptic dementia was about 180 mm. This was higher than what was observed by Nawratski and Arndt, who give their mean as between 100 and 150 mm. Schaefer observes that his were cases of long-standing dementia, in which there was atrophy of the brain and hydrocephalus *ex vacuo* ; he found that the pressure of the spinal fluid was much increased by impeded or suppressed respiration. He found that in fifteen idiots the fluid pressure varied from 130 to 500 mm. The mean was 220 mm. In twenty imbeciles the pressure ranged from 65 to 290, the mean being 170 mm. This he considers to be owing to the transudation of fluid in place of defective development of the brain, or sometimes owing to the deposit of meningitis. The quantity of albumen in the spinal fluid of healthy persons is very small.

Nawratski found that in general paralysis the albumen in the spinal fluid was always increased, the quantity ranging from 0.468 in the thousand to 1.696, the mean being 0.891 per mille.

Schaefer himself found an increase of albumen in all the cases of general paralysis ranging between 0.75 and 3.5 per thousand, the mean being 1.23.

He gives the amount of albumen in the spinal fluid in patients suffering from various affections, as ascertained by Riecken, to be in—

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| Meningitis serosa chron. and hydrocephalus . | 0.95 | per mil. |
| Meningitis serosa acuta | 1.84 | „ |
| Meningitis tuberculosa | 200.0 | „ |
| Tumor cerebri | 2.17 | „ |

Schaefer himself found that the mean amount of albumen in the spinal fluid was—

1. In dementia after apoplexy . . . 0.25—0.3 per mil.
2. In secondary dementia . . . 0.3 —0.5 „
3. In congenital weak-mindedness . . . 0.33—0.5 „
4. In epileptic dementia . . . 0.3 —0.5 „

In four cases of this form it was 0.75—1.5 per mil.

Dr. Schaefer gives as the general result of his researches that in general paralysis the pressure of the cerebro-spinal fluid is notably increased, as also the proportion of albumen, and that in the other forms of mental impairment the pressure of this fluid is almost always higher than in the normal condition. WILLIAM W. IRELAND.

6. Treatment of Insanity.

The Serum Therapeutics of Epilepsy [La sieroterapia dell' epilessia]. (Arch. di Psichiat., vol. xxiii, fasc. 4, 5, 1902.) Roncoroni.

The author criticises adversely the experiments and theories of Dr. Ceni published in a paper analysed by Dr. Sainsbury in this JOURNAL (*vide* page 782), and records a series of observations which he has made with a view to testing Ceni's results.

In Ceni's cases any favourable effects of the serum injections were evident within the first fortnight of treatment. Roncoroni has therefore assumed that a relatively short period of experiment is sufficient for decision, and his observations have accordingly been made within a period of three months.

Serum from one female and five male epileptics was injected at regular intervals and in increasing doses into eight other patients—six epileptics, one dement, and one imbecile. No effect whatever was produced either on the body-weight or on the frequency of the fits. In further experiments serum from two of the epileptics and from the two non-epileptics in the above series, taken at the beginning of the second month of treatment, was similarly injected in progressively increasing doses into four other epileptics. Here also the results were entirely negative. In none of the experiments were any toxic effects noted.

These observations accordingly are in contradiction with Ceni's theory of a "specific stimulating substance" in the blood-serum in epilepsy, and also with the hypothesis that the serum in epileptics contains any substance capable of determining the formation of epileptic antitoxins. W. C. SULLIVAN.

Clinical Treatment of Inebriety. (Quarterly Journ. of Inebriety, vol. xxiv, No. 2, April, 1902.) Crothers.

In this paper the author has put together some general observations suggested by his exceptional experience in the treatment of the inebriate. It is noteworthy that, on the whole, his attitude is distinctly optimistic. In the first place he pleads for more discrimination