

realized her condition, making the remark to the nurses just before she died, "Your reward shall be in heaven," were important factors against the diagnosis of general paralysis. With regard to the latter point, however, I may remark that a patient who died of undoubted general paralysis a short time ago in Bethlem Hospital had a somewhat similar clearing up of dementia, and on the day he died said to me, "I'm dying; I've run through my life." The case now reported agrees with Dr. Mickle's remark that it is the progressive dementia of general paralysis, and not its expansive delirium, which is simulated by cerebral tumours.

In the fact of considerable convolitional affection, the case agrees with the statement of Dr. Clouston as to the frequency of such a condition in cases of brain tumour associated with insanity.

3. The absence of optic neuritis throughout the case is unusual; the eyes were examined the day before her death, and not the slightest sign of any change was observed. There was no affection of sight, and in connection with this it may be observed that the occipital lobes were unaffected.

4. Dr. Clouston, in his work on mental diseases, remarks that different authors have had different experiences as to the frequency of brain tumours in the deaths of the insane, varying from 2 per 1,000 deaths up to his figures, 28 per 1,000, and that it is doubtful whether brain tumours are more frequently found in autopsies in lunatic asylums or general hospitals. With regard to the latter point I have looked at the annual tables in St. Thomas's Hospital reports and find that in the last four years there have been 1,254 deaths in the medical wards, and of these 27 died of cerebral tumour. This is about 21.5 per 1,000, and, therefore, below Dr. Clouston's figures.

General Paralysis in Twins. Cases reported by Dr. CLOUSTON and Dr. SAVAGE.

Several interesting examples of the insanity of twins have been recorded in this Journal. No instance, however, has been published in any journal of insanity as occurring under this condition, in the form of general paralysis. The first case is reported by Dr. Clouston, from whom we have received the following notes; the second case was that of a patient in Bethlem Hospital, under the care of Dr. Savage.

(I.) B. H., *æt.* 37 on admission to Royal Edinburgh Asylum on the 18th April, 1885.

Family History.—Father died of consumption at 60; was a sensible man, but irritable. Mother died over 70, a placid, gentle, but determined woman. There is no history of insanity, epilepsy, or excessive drinking in ancestry.

There were nine sons and daughters, all more or less clever, and none of them ugly or malformed. One sister, second child, was a little "peculiar." Another, the third, was not "sensible," being emotionally religious, excitably hysterical, and given to lying in bed for months for no sufficient cause. B. and J. were born sixth, being twins. Their temperaments and bodily aspects were quite different. J. was short, rather stout, not imaginative, and easy going. B. was thin, sharp, enthusiastic, ambitious, and irritable. Both became commercial travellers at about 18 years of age. B. did an enormous amount of work in a very keen way, and was reckoned one of the best travellers in his line. His mode of life was the following: He would do his work keenly all day, taking two or three "whiskies" when at work, and some wine at lunch. He would take a fair amount of champagne with his dinner, and would then sit up playing cards and drinking moderately but continuously till about 4 a.m. He was a small eater. J. was a large eater, took too much liquor too, usually whisky and bottled porter. B. never got excited with liquor, or obviously drunk. Both twins were fast with women before marriage. B. was evidently very sexually inclined, for he would often take an "actress" to supper, and have connection with her four or even six times before morning, and this took place every six weeks or so. There was no history of syphilis. He married in 1879, and had connection with his wife night and morning regularly when at home. They had no children. In 1883 B. "went mad" over bicycling, and got many falls. In the spring of 1884 his wife thought he showed signs of his mind and brain giving way. After that he got depressed and could never again do his work well. He gave up liquor from that time. He had been subject to no bodily complaint but indigestion. The first mental symptoms were depression a year before he became insane, this gradually passing off, followed by elevation, with exalted ideas, foolish, extravagant acts, useless purchases, great ideas of his strength, wealth, and power in his business, his "temper" becoming ungovernable. All this came on a few weeks before admission.

I saw him in consultation with Dr. Gibson a few days before admission, and found well-marked symptoms of general paralysis in the early stage to be present.

He was admitted to the Royal Asylum, as stated, 18th April, 1885, and was then very exalted mentally, saying he was to be made a partner in his firm, was to live in a great house in London, and keep a carriage, and at times that he was king of the country. He was much excited and restless; his memory was impaired and unreli-

able. He had some delusions of suspicion as to electricity being "worked" on him, and that he had been "drugged" and then throttled in his sleep by some detectives. His speech was slurring and the facial muscles of expression slightly tremulous at times, his reflexes exaggerated, sensory power normal, tongue tremulous, pulse 79, regular, temperature 98.8, weight 9st. 4lbs.

For about a week he got more quiet and rational, then he began to express ideas as to being a wonderful linguist, uttering a lot of gibberish and saying it was Hebrew, Arabic, and Greek. He then got more excited, began to ornament himself with feathers and—fatal sign—sticking flowers in all his button-holes, and generally to demean himself like a typical general paralytic in the first stage. He soon got very noisy at night. He gained, however, by dint of extra feeding, 15lbs. in weight in the first three months. His speech scarcely got perceptibly worse in that time. In four months he became less excited and rather depressed in mind. Instead of everything being fine in the asylum, as at first, he said it was all very bad, that he got no food, and that he was badly treated. He began to wet his bed about this time.

In a year he had passed into the second stage, the pareses of speech and walking being very well marked. Mentally he was more lethargic and quiet. Paraldehyde in two-drachm doses gave him good, sound sleep, and stopped the noise, filth, and excitement that he was subject to at nights.

After a year and a half's residence he might be considered to have passed into the third stage of his disease, being stupid, dirty in his habits, noisy at night, with his delusions of grandeur still present, though more incoherently expressed. In another three months he was lying on a water bed, contracture taking place in his limbs, especially on the right side, and rapidly losing weight. On July 27th, 1887, he died. His wife absolutely refused a post-mortem examination.

His disease may be said to have existed for a year in the preliminary stage of volitional loss of force, intellectual confusion, and emotional depression; for another year in the exalted, inco-ordinated first stage of recognizable general paralysis; for six months more in the second torpid parietic stage of that disease; and for nearly another six months in the third terminal paralytic stage.

The most noticeable features of the case were:—

1. That he was a twin.
2. That mental neurosis existed, but to a very small extent, in his family.
3. That he came of an able, sensible, energetic family on the whole.
4. That he was of a sanguine temperament, and was ambitious, restless, and keen.
5. That he led exactly the kind of life to develop general

paralysis, viz. : an exciting, responsible, energetic, active one, with none of the restfulness that comes of fixity of hours or occupation in it.

6. That he poisoned his brain by an excessive use of alcohol up to stimulation, but falling short of drunkenness.

7. That he exhausted his brain by excessive sexual intercourse.

8. That at 36 he showed the preliminary signs of general paralysis, developing the actual disease unmistakably the following year.

9. That he took the disease within twelve months of his twin brother, who had led the same sort of life.

10. That the disease ran a normal course as to symptoms and duration.

T. S. C.

(II.) J. H., aged 38, married; engaged in business; four children, two only living. No neuroses in parents. One brother, a twin, suffered from and died of general paralysis of the insane at the Royal Asylum, Morningside. (Foregoing Case.)

Father and one sister died of phthisis. The patient never had any serious bodily illness, he was sober and never had syphilis. He had had business worry.

The first signs of mental disorder were noticed 12 months before admission to Bethlem, Nov. 9th, 1886, when he became excitable, quarrelsome, and apt to forget his business engagements. He was also emotional, and on one occasion attempted in a silly way to smother himself. He wandered from home in an objectless way. He complained of tinglings in his extremities.

I saw him a short time before his admission into Bethlem, when he was weak-minded, but did not seem to need seclusion. Later he became difficult to manage, and so he was certified. On admission it was said that he had shown marked signs of insanity for six months, and overwork and worry were given as the causes. He was said then to be incoherent in speech, to mistake people whom he knew perfectly, to have very false and exaggerated ideas of his wealth. He said he was a great friend of the Queen, the Prince of Wales, and other great persons. He said, too, that he had many wives.

He was constantly restless, sleepless, and at times violent. Tongue furred, tremulous. Speech thick and indistinct. At times he refused his food; appetite bad. He passed his stools under him. His heart and lungs were normal. Pupils equal, reacting.

Common sensibility generally impaired; reflexes subnormal and delayed; walk feeble and tottering; skin sweating, greasy, especially about the face. He was obstinate and self-contained, but with aspect of silliness rather than that of misery. He had to be fed by the spoon.

After a few weeks in Bethlem he became brighter, though still silent. He was more clean and easily managed. There were at this time noticed to be some twitchings of the facial muscles.

Dec. 3.—He was shouting and accusing another patient of being a murderer.

Dec. 10.—Since admission he has lost ten pounds in weight; pupils now irregular and unequal. He is restless, constantly pulling at the buttons of his coat.

During the spring and summer of 1887 he remained in a very uninteresting state. He would lie in the arm-chair, taking no notice of anyone or of anything around him. He would eat all that was put into his mouth, but he could do nothing to help himself. At times, if interfered with in any way, he would screech out. He had no local palsies and no fits, but he was generally too weak to stand. He was wet and dirty.

In October severe intractable diarrhoea set in, and he slowly sank and died, without a single gleam of returning reason, on October 18th, 1887.

Post-mortem examination October 21st, weather very cold and dry. Body much wasted; no bedsores or bruises; no special muscular wasting, but both great toes were firmly inverted.

Scalp hairy, calvaria thick, heavy, and dense. Dura mater depressed along middle line by pacchionian bodies. Arachnoid not specially thick, but there were several small lakelets of sub-arachnoid fluid, one at junction of first frontal with ascending frontal convolution on left side. Frontal convolutions were generally much wasted, and there was excess of fluid present. Whole brain weighed 37 ounces, lateral ventricles dilated with fluid.

Grey matter throughout of good colour, rather darker than usual; white matter firm, with numerous puncta. Arteries of brain only slightly atheromatous. No granulations on the floors of the ventricles. Medulla and cord normal to naked-eye appearance. There was slight grey degeneration of the posterior columns in cervical region of cord. No apparent change in lateral columns. Heart firm, small, 8 ounces. Aorta very atheromatous. Kidneys small, normal. Liver 37 ounces, normal; marked acute or chronic changes with degeneration in left lung.

G. H. S.

A Case of Insanity of Adolescence. By JOHN KEAY, M.B.,
Mavisbank Asylum, Edinburgh.

David A., 20 years of age, was admitted into the Crichton Institution on 31st May, 1886.

The history of the case showed that the patient was a medical student of the second year, steady in his habits, a diligent reader, and possessed of considerable ability. No hereditary neurotic tendency could be traced. He had laboured under delusions of