returned to her room. She suffered from peculiar electric-like sensations. The left pupil was a millimetre and a half narrower than the right under moderate illumination. The tongue deviated markedly to the right, as a whole; vertigo was subjectively complained of, and there was a distinct Romberg symptom. She was clumsy in gait, tottering along and stepping on her feet or skirts in walking. The knee-jerks were normal. In speaking of her symptoms she was very communicative. On two occasions, having previously ascertained at what hours I was away from home, she called, deceiving her husband as to where she was going, came to my office, and there cross-examined the servant girl for an hour on each occasion, and on one was with difficulty prevented from penetrating to the family apartments to extend her inquiries further. She wished to learn whether I had not deceived her with a favourable prognosis, whether I had had other patients like her, whether they had been as bad as she was, and if any of them had committed suicide. She was taken to Parson's Retreat at Greenmont, and made a happy recovery. The disturbance of co-ordination and deviation of the tongue disappeared; a slight inequality of the pupils remained. If anything in her mental state could be questioned it was the feigned interest she took in the institution to which she owed her recovery, and to which she was instrumental in sending other patients.

(*To be continued.*)

Case of Secondary Carcinoma of the Brain, simulating General Paralysis of the Insane (with plate). By R. Percy Smith, M.D., A.M.O. to Bethlem Royal Hospital.

C. M. F., æt. 40, wife of an artist; had one child, aged six years. Admitted into Bethlem Hospital March 31st, 1887.

Family history.—One brother was formerly in Bethlem Hospital. He was admitted in 1876, suffering from melancholia, with ideas of persecution, and soon became weak-minded. He was placed on the incurable fund, and eventually died in 1885 of uræmic convulsions, the result of contracted granular kidney.

Previous history.—Patient was always considered "nervous," and earlier in life had some sort of convulsive seizures, the nature of which was not quite clear. Her husband had always been a little anxious about her mental condition. Two and a half years before admission she had suffered from cancer of the left breast, which was removed by Mr. Davies-Colley, and did not recur. There was no mental disturbance immediately after the operation, but the right pupil was noticed to be smaller than the left. For two years, however, she remained practically well.

Present attack.—In October, 1886, she began to complain of severe headache, frontal and occipital, and some giddiness; but beyond this her

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friends did not notice anything more than a little strangeness of manner up to the end of January, 1887; and at this time she was able to travel alone. In February, however, it was noticed that letters which she began legibly ended in a scrawl which could not be read, or she would leave a letter unsigned. She also posted letters to different people in the wrong envelopes. She was noticed to do things mechanically and without interest. Her powers of drawing and painting became very much affected, and she took no interest in her husband's work, and, moreover, became untidy and neglectful in dress and dirty in habits.

At this time she had a succession of epileptiform fits, with constant vomiting, and had hallucinations of hearing. She suffered from what her husband called "utter mental collapse" after any attempt at carrying on a conversation; and after walking she was extremely prostrate physically.

She was admitted to Bethlem Hospital on March 31st, 1887, on certificates which stated that she had a vacant look, that she was under the impression that she had full possession of her powers, contrary to what was really the case; that she was dirty in habits, was unable to use her hands intelligently, and was losing power of walking.

On admission.—Patient was a dark-complexioned woman, with rather pale, muddy skin, with a vacant expression and languid manner, walking with a tottering gait and tendency to catch her toes in any obstruction; co-ordinate movements of the lower limbs were not well performed, and the gait was slightly spastic. She failed to stand with feet together and eyes closed, and had a tendency to fall forwards. Her knee-jerks were exaggerated. The movements of the arms were jerky, and there was an irregular tremor in the hands when an attempt was made to use them, and finer movements, such as in writing, were badly executed. The grasp was, however, fairly good and equal. Her appearance was slovenly and untidy. The left pupil was larger than the right, but both acted to light and accommodation, and there was no optic neuritis, and no affection of sight. The tongue was protruded slightly to the left, but was not markedly tremulous, and the left angle of the mouth slightly lower than the right; there was a good deal of smoothing out of lines on both sides of the face. She spoke very quietly and slowly, and as if with some effort, but the attempt to speak was not associated with fibrillar tremors. She complained of constant languor and fatigue and of sleeplessness at night, and occipital headache. Common sensation did not appear to be affected. She thought her friends had sent her here to get rid of her and that everyone was tired of her, but did not seem to have any hallucinations nor exaltation. For the next four months she remained very quiet and very weak physically and mentally; there was for a time some approach to exaltation in a feeling of well-being and of being quite able to do artistic work, though her drawing was like that of a child. The memory varied from time to time, but she

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could by an effort generally recall her past history. She occasionally vomited after food, but neither vomiting nor severe headache were marked features at this time, the most prominent symptom being great general physical prostration, without any marked local paralysis or hemiplegia. By the end of September she had to be kept on a water bed as she was losing flesh rapidly, and there was fear of a bed-sore developing in consequence of the persistent incontinence of urine and fæces. During the next month she had occasional slight convulsive attacks ; her voice became extremely feeble and speech very slow, but still intelligible, and, although she recognized people, she quite failed to appreciate her condition.

By the end of November, however, a mental improvement took place, and she seemed to realize that she was paralyzed and about to die, and that she had no control over her evacuations, a matter which did not seem to have troubled her before. During this month the legs became gradually flexed till they were strongly bent up on the abdomen and rigid, the right being the most affected. There was ankle clonus in both, but most marked in the right. The left arm became drawn tightly up to the chest, flexed at the elbow and rigid ; the right arm less flexed, but with very little power in it, and she complained of pain in all her limbs. The left pupil still remained the larger, but the right angle of the mouth was lower than the left, and the face drawn to the left. Difficulty in swallowing came on, the neck became retracted and back hollowed ; there was now no vomiting and no headache, but she complained of constant wakefulness.

On December 13th, at 8.30 a.m., she had a general convulsive attack, but with head drawn to the left, and an hour later another, followed by flaccidity of the right arm and extreme dilatation of the left pupil. She then became comatose and died. The optic discs were examined so recently as the day before death, but there was no neuritis.

Post-mortem examination twenty-eight hours after death. The skull was found to be much thinned. The dura mater was normal, surface of brain dry ; no subarachnoid fluid visible, and convolutions much flattened on both sides of the brain as if by pressure within. The pia mater was thin, peeled readily off, except over a patch of the size of a half-crown, grey in colour and dense in texture, situated at the posterior extremities of the first and second frontal convolutions on the left side. The ascending frontal and parietal convolutions on the same side were very straight, and appeared to be pushed back. On removal of the brain it was at once noticed that the right hemisphere was much larger than the left, and that the inner side of the right hemisphere bulged over and hid the anterior two-thirds of the corpus callosum, and indented very considerably the left hemisphere. On cutting across the brain, immediately above the corpus callosum, the substance of the right hemisphere was seen to be soft and of an opaque white colour, the grey matter being pale and thin, and almost invisible in places,

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whereas the left hemisphere appeared to be normal in colour and consistence, and was smaller than natural by reason of pressure from the opposite side. Beneath the surface, at the dense spot noticed above, there was a round nodule of new growth occupying the cortex and subjacent white matter, and about the size of a hazel nut. The septum lucidum was pressed over to the left; there was no excess of fluid in the ventricles. No defined tumour could be found in the right hemisphere, the whole of that side of the brain (except the occipital region) appearing to consist of diffused white, softish new growth, which pressed the corpus striatum and optic thalamus to the left, and flattened them out. The left crus cerebri was apparently stretched, producing distortion of the pons Varolii, but there were no naked-eye changes in the pons or medulla.

The cord was soft on section, there were no definite naked-eye changes noted, except some indistinctness of the grey matter. The rest of the organs were healthy. The scar of operation on the breast was quite free from any sign of recurrence.

Microscopically the growth was found to be scirrhous carcinoma.

The following appear to me to be the most interesting features of the case:—

1. The fact that the onset of the disease was marked by mental and physical failure together. Although cerebral tumours are in most cases attended with mental disturbance of some sort, the motor symptoms are, as a rule, earlier than mental, and, associated with headache, vomiting, and optic neuritis, generally give occasion for a diagnosis to be made before the onset of the final coma. The fact that there was collateral insanity in the family probably was the explanation of the early mental trouble.

2. In the fact of progressive dementia and general loss of power, associated with alteration of handwriting and speech, loss of expression, unequal pupils, some tremor of hands and general feeling of well-being, and the presence of epileptiform convulsions, the case resembled at one time the more quiet and demented form of general paralysis.

Although severe headache and vomiting had been early symptoms, they were for some time after her admission to the hospital quite absent; and, further, no optic neuritis existed throughout the illness. The paralysis, moreover, was never of the nature of marked hemiplegia, and there was no affection of the ocular muscles, and very slight loss of power in the face and tongue. Still the history of a growth having been removed from the breast, and the fact that towards the end of the illness the mental disturbance became less, so that on the day she died she became clear and

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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 convolutional 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.

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