A Case of Localised Cerebral Atrophy. By J. WIGLESWORTH, M.D., Lond., Assistant Medical Officer, Rainhill Asylum, Lancashire.

Margaret E., æt. 19 years, was admitted into Rainhill Asylum, Sept. 27th, 1880, under the care of Dr. Rogers, who kindly permits me to publish the case.

Her history was that she had been healthy up to the age of nine years, about which time she received a fright from a drunken father, and ever since then had suffered from symptoms of cardiac mischief, such as palpitation, dyspnora on exertion, &c. She never suffered from rheumatism, nor did the fright above-mentioned develop any choreic symptoms. In Dec., 1876, she was suddenly seized with paralysis of left arm and leg, and it appears that she was partially unconscious at the time of the seizure, but this loss of consciousness was only temporary; her speech was also affected for a few hours, but this rapidly passed away; she was then admitted into the Liverpool Royal Infirmary, where she remained about three months, and on her discharge from there she had regained some slight power over the left arm, and could walk, though with a limp; since then she had had five attacks of a similar nature, in each of which she became unconscious, and the paralysis of the left side returned in all its completeness, but partial improvement resulted on each occasion after a time; the last attack she had was last summer, and she is said then to have been unconscious for three days. During all this time her mother noticed an impairment of her intellectual faculties, which was discernible after the first paralytic attack, but became intensified with each succeeding one; she was rather childish and silly, but still fairly intelligent. It may be added that patient's father had been a drunkard all his life and died of delirium tremens; her mother is living and healthy. No history of insanity or epilepsy, &c., in family.

On admission patient was found to be well nourished. Area of cardiac dulness much increased, and impulse displaced outwards; short pre-systolic bruit in 4th and 5th left spaces close to sternum, not heard at apex, where first sound was somewhat muffled. Pulse 66, small, weak, and slightly irregular. Urine contained a trace of albumen. Digestive functions well performed. Left arm and leg partially paralysed; left arm kept in semi-flexed position, with fingers flexed into palm, somewhat rigid, and patient had very slight voluntary power over it; left leg weak, but available for progression, patient walking with a limp, sometimes dragging the left leg, sometimes swinging it round. Knee-jerk exaggerated in left leg; ankle clonus not marked; both arm and leg in good state of nutrition. Speech unaffected. Tongue protruded straight. No facial paralysis. No disturbance of vision. Pupils normal, and acted well to light.

Her physical condition varied but slightly after admission. She

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was apt to become somewhat cyanotic upon trifling exertion, and not unfrequently wet her bed at night. On Dec. 16th, she got an attack of congestion of the lungs, became very cyanotic and pulseless at each wrist; urine contained one-half albumen, and both feet were œdematous. She had at that time a marked thrill at the heart's apex, and a loud systolic bruit heard over greater part of chest; cardiac dulness extended superiorly as high as 2nd left space. Liver extended an inch below ribs. She died on Dec. 20th.

Her mental condition was pretty uniform during the time she was under observation. Her expression was not unintelligent. She was very quiet and sat still the greater part of the day, rarely speaking unless addressed, but would occasionally make an observation to one of her fellow-patients. She would, however, frequently laugh and grin without apparent cause, and when asked what was the matter, said, "Nothing." She usually replied to questions in monosyllables. There was indeed some obvious impairment of mental vigour, and yet the patient was fairly intelligent. She gave, in reply to questions, an account of her past life, which subsequently turned out to be substantially accurate. Her memory was, however, found to be distinctly, though not greatly affected, as regards events passing around her. She was always well-behaved and docile, and would sometimes inform the attendant if she saw any of the other patients getting into mischief.

One was apt, indeed, from the habit she had of constantly grinning, and from the difficulty there was in getting her to converse, to give her credit for less intelligence than she actually possessed, for she occasionally made observations which showed that her discriminative faculties were by no means in abeyance.

Autopsy.—Skull-cap thick and dense; dura mater not abnormally adherent to skull, but connected with visceral arachnoid over right frontal region, by two or three filiform fibrous bands. Arachnoid opaque, and it and pia mater moderately thickened over right frontal, and anterior part of right parietal lobes, normal over remainder of right hemisphere, and over the whole of left. Left hemisphere reached about an inch beyond right in frontal region. Right frontal convolutions, superior, middle, and inferior, including the continuations of these on the orbital surface—gyrus rectus, &c—were all greatly wasted to at least one-half the size of the corresponding convolutions on the opposite side; they also had a distinctly yellow hue, and were slightly softer on the surface than the rest of the brain; the right anterior and posterior central gyri, the superior parietal lobule, the median aspect of the superior frontal, and the anterior half (about) of the gyrus fornicatus were also somewhat wasted, but in a much less degree; excess of sub-arachnoid fluid filled up the vacant spaces. On separating the temporo-sphenoidal from the frontal and parietal lobes (right side), by opening up the Sylvian fissure, after breaking down numerous small adhesions, in this situation, a space was dis-

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closed which would have contained a pigeon's egg; this cavity appeared to have been formed by the total disappearance of the convolutions of the island of Reil, no trace of which could be found; the boundaries of the space were formed by a dense membrane, firmly incorporated with the surrounding brain-tissue. The remainder of the convolutions on the right side appeared perfectly healthy. The ventricles generally were slightly dilated, containing an excess of clear fluid; the anterior cornu, and anterior part of the body of the right lateral ventricle were considerably dilated, and, being filled with fluid, gave the appearance of a cyst, continuous however with the general ventricular cavity; the ependyma was much thickened here; the intra-ventricular part of the corpus-striatum had almost completely disappeared, a small portion only being left, flattened out on the floor; the partition between the outer boundary of the cavity thus formed and the inner boundary of the cavity described on the external surface (as formed by the disappearance of the central lobe) was not more than a line in thickness. The right optic thalamus was also considerably wasted, especially the anterior half; it was diminished in size, altogether by about one-third.

The left hemisphere was perfectly healthy. After removal of membranes, left hemisphere weighed 18oz., right, 13oz.; cerebellum, pons and medulla weighed 5oz.

On section of the right frontal convolutions, the cortex was found much atrophied, in many places not more than one-third the depth of the corresponding cortex on the healthy side. Microscopically the nerve-cells were found much atrophied, rounded, with processes broken and twisted. The lumen of the right anterior cerebral artery was obliterated at its origin, and the vessel for some two inches beyond this was empty, and appeared to have dwindled into a fibrous cord; the channel was, however, pervious here, and further on the vessel contained blood. Right middle cerebral and main branches appeared perfectly healthy, as were all the other vessels.

Heart weighed 17ozs. Right auricle enormously distended, reaching into second and third left intercostal space; left auricle contained a round ball of fibrin, size of walnut, smooth on surface, and unattached, having a cavity in centre size of small marble, round which the fibrin was disposed in concentric layers. Tricuspid valve much thickened and contracted; would only admit the tips of two fingers; mitral valve also stenosed, but in much greater degree; would only admit a No. 12 catheter.

Both lungs congested and œdematous, and structure tough.

Liver in nutmeg condition. Enlarged; weight 56ozs.

Spleen puckered on surface, and connected by fibrous bands with surrounding parts; structure firm; weight 4oz.

Kidneys, right weighed 3ozs., left 6ozs. Both were very irregular on surface, and presented numerous depressions, evidently formed by the absorption of old infarcts; both congested and tough.

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Remarks.—In this case it may be considered that the right frontal and central lobes were functionally destroyed, and I think the results that ensued are fairly comparable with those obtained experimentally by Ferrier. Monkeys deprived of their frontal lobes "remained apathetic, or dull, or dosed off to sleep. . . . and while not actually deprived of intelligence, had lost to all appearance the faculty of attentive and intelligent observation."* This account appears to me to be a not inaccurate description of the mental condition of the patient, but it must be remembered that, in this case, only one frontal lobe was destroyed.

The cerebral atrophy was no doubt due to insufficient supply of blood, owing to embolism or thrombosis of the anterior cerebral artery, and branches of the middle cerebral.

Contagiousness of Delusions. By Dr. NEEDHAM, Barnwood House Hospital for the Insane, Gloucester.

The interesting cases recorded by Dr. Savage in the last number of the "Journal of Mental Science," under the head of "Contagiousness of Delusions," recall to my recollection a case which was under my care, many years since, at the York Hospital, some particulars of which it may not be uninteresting to relate.

The patient was a clergyman who had taken high honours at college, and become the head-master of a grammar school. There was hereditary tendency to insanity in the family, and his elder brother became insane, believing that he was being conspired against by the members of a family in the neighbourhood, who had succeeded in establishing between themselves and him a "rapport" by means of which each could hear the words and read the thoughts of the other, even when separated by distance. Under the influence of this delusion he committed suicide.

Soon after his death my patient took up the same idea, and was sent to the York Hospital, where he remained, the subject of this delusion, but otherwise intellectually clear, up to the time of his death from apoplexy, which occurred after a residence of many years in the asylum.

The delusion under which the younger brother laboured

* "The Functions of the Brain," by W. Ferrier, p. 232.

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