Clinical Case.

CASE ILLUSTRATING CEREBRAL LOCALISATION.

BY JOSEPH WIGLESWORTH, M.D. (LOND.)

Assistant Medical Officer, Rainhill Asylum.

THE following case, in which permanent partial left hemiplegia, and amnesic aphasia were associated with lesions of the right paracentral lobule and left temporo-sphenoidal lobe respectively, appears to be of sufficient interest to justify its publication; and I am indebted to Dr. Rogers, under whose care the patient was, for permission to publish an account of it.

The patient was a female, aged 71, who died in Rainhill Asylum on the 31st of August last, having been an inmate of that Institution for four and a half years.

The only history obtainable was to the effect that she had had two hemiplegic attacks previous to admission. Her condition was pretty uniform during the whole time she was under observation; but it must be mentioned that the hemiplegia—to be shortly described—though never absolute, was most pronounced on admission, and that subsequently a certain small amount of improvement took place. Her condition as manifested at the commencement of the present year may be summed up as follows:—She was a heavy, big-boned woman, with hypertrophied heart, degenerated arteries, and signs of chronic Bright's disease. She had partial left hemiplegia; the arm was practically useless, though she had some slight amount of power in it; the fingers were bent into the palm, and the arm was kept permanently flexed; it could, however, be straightened: the leg was less paralysed than the arm, and patient could walk without assistance, though she did so with a decided limp, and her gait was manifestly insecure; the left leg was distinctly wasted as compared with the right, measuring round the most prominent part of the calf one and a half inches less than on the right side; knee-jerk distinctly exaggerated on the left side; no ankle clonus; no distinct facial paralysis. In addition to this hemiplegia, the patient had great disorder of speech. Her power of articula-

tion appeared unimpaired, and she could articulate some words correctly; but when she attempted to express her ideas, her speech became an unintelligible jargon, in which, though individual words could be deciphered here and there, the incoherent jumbling together of single syllables seemed to form the most prominent feature; when talking rapidly her speech was absolutely undecipherable, not one word she said could be made out; she not unfrequently uttered this gibberish with great volubility. Her mental faculties appeared to be gravely impaired, though it is possible that, owing to the disorder of speech, she got credit for less intelligence than she actually possessed. As a rule, she sat very quiet, seldom attempting to speak unless addressed, and was in general tractable enough; if, however, her usual habits were in any respect interfered with—if, for instance, she was put to sleep in a strange room or bed—she got very restless and excited, and chattered away very volubly, though, as above stated, her speech was quite unintelligible. She clearly understood some things that were said to her; but the impression conveyed was, that her mental faculties were much impaired, that she was, in fact, considerably demented.

On the 25th of August last she was observed to be not looking well, and on examination of chest well-marked pericarditis was found to be present, and she had one-third albumen in her urine; her breathing became embarrassed, and she appeared to be suffering, but made no attempt to complain of anything; she gradually sank and died, as before mentioned, on the 31st of August.

The autopsy was performed on the same day, four hours after death, and the following is an abbreviated account of it.

Cranium.—Skull-cap a little thick; dura mater very adherent to it; there were four ounces of fluid in subdural space. Arachnoid and pia mater a little thickened, everywhere stripped very readily; considerable excess of subarachnoid fluid. Gyri generally somewhat wasted.

Right Hemisphere.—The gyrus fornicatus for the posterior two-thirds of its length had completely disappeared, as also the lower half of the paracentral lobule; these parts had evidently softened down and been absorbed, their position being occupied by a thin membranous bag containing fluid—they had, in fact, been converted into a cyst; the surrounding brain-substance was ochre-stained; the upper half of the paracentral lobule was also superficially softened.

The supra-marginal gyrus was also much atrophied and ochre-stained.

Left Hemisphere.—The middle of the temporo-sphenoidal lobe was occupied by a cyst with ochre-stained margins

similar to the one above described; this involved the upper part of the middle temporo-sphenoidal gyrus, and the middle third of the superior temporo-sphenoidal gyrus; these parts were completely destroyed, and the white matter around, for some distance, was softened.

Cortex of average depth; striæ fairly distinct. Consistence of brain good. *Basal gangliæ perfectly normal, as also were the crura cerebri, pons and medulla.*

Brain (immediately after removal) weighed 1064 grammes.

Right Hemisphere	396 grammes	} stripped of (membranes.
Left	417 "	
Cerebellum	127 "	
Pons	14.5 "	
Medulla Oblongata	6 "	
	<hr/> 960.5 <hr/>	

The main cerebral vessels to their third and fourth ramifications were in an exceedingly atheromatous condition, appearing in some places almost occluded by the thickening of their walls.

As regards the thoracic and abdominal viscera, it may be briefly stated that the lungs were emphysematous; the pericardium acutely inflamed with much effusion of lymph; the heart, weighing 18½ ounces, generally hypertrophied, especially the left ventricle; and that the kidneys each weighed 6½ ounces, had granular surfaces and mottled cortices.

Remarks.—This case is remarkable in the fact that permanent left hemiplegia—incomplete, it is true—was associated with a lesion in the right hemisphere, confined, as regards the motor area, to the paracentral lobule.

Paralysis, partial or complete, of the leg only, in connection with an affection of this lobule, would indeed be quite in accordance with pathological teaching; but the simultaneous implication of the arm is not altogether easy to understand, both central convolutions being intact, as regards their external aspects. The hemiplegia resembled the ordinary kind in the fact of the arm being more paralysed than the leg, nor was there anything—except it were the absence of facial paralysis—to suggest an origin for the affection other than the usual one of a lesion of the pyramidal tract.

The affection of speech would clearly come under the head of “amnesic aphasia,” and the localisation of the lesion in the left temporo-sphenoidal lobe seems fairly to agree with that of other recorded cases.

The destruction of brain-tissue was doubtless in all parts due to thrombosis of the vessels supplying the areas in question.