catheter was passed; and about an ounce of pale-coloured slightly turbid urine drawn off into a chemically clean bottle, which was then sealed and labelled. On reflecting the skin, the subcutaneous fat was found to be small in quantity, and the muscles of the thorax pale in colour. There was about three ounces of blood-stained fluid in the peritoneal cavity; and the stomach and intestines were moderately distended with flatus. There were no signs of inflammation. A ligature was placed round the oesophagus, about two inches above its cardiac orifice, and another round the transverse part of the duodenum. The stomach was not removed at this stage, the examination of the thorax being proceeded with. The usual amount of the heart was uncovered by lung. There were about two ounces of blood-stained fluid in each pleura, and about two drachms of a similar fluid in the pericardium. The heart weighed fifteen ounces, and was much enlarged, soft, and flabby. The substance was pale and mottled, and distinct patches of fatty degeneration were perceptible, especially in the left ventricle. The valves were apparently competent; the circumference of the mitral valve was four and a half inches, and that of the tricuspid five inches. The maximum thickness of the left ventricle was five-eighths of an inch. Good muscular tissue existed to the extreme apex of the right ventricle. There were some atheroma of the coronary arteries. The aorta was uniformly distended. It was generally deficient in elasticity, with a small amount of atheroma. The aortic cusps were slightly thickened, but not atheromatous. No clots were found, even in the extreme auricular appendages, and very little blood. The lungs were intensely congested, especially posteriorly, and were almost black from decomposition. They were crepitant throughout. The gullet, stomach, and duodenum were removed, and placed in a clean bottle, which was sealed and labelled. The liver, kidneys, and spleen were small, but healthy. They, too, were preserved in separate vessels. The intestines were empty. The trachea and pharynx were examined, and no sign of foreign body, or ulceration, or other morbid change, was observed. There was no sign of injury to the scalp or skull. The dura mater was normal. There was considerable subarachnoid effusion, chiefly over the posterior half of the brain. The vessels and sinuses were very empty. There was some atheroma of the vessels of the circle of Willis, and of those in the Sylvian fissure. There was no hemorrhage of any kind in any part of the brain. The spinal cord was removed and carefully examined, and no sign of congestion or extravasation was found.

Sufficient cause of death not having been found at the *post mortem* examination, the specimens, preserved as above described, were subjected to analysis. A large quantity of strychnia was found in the stomach, together with sixteen ounces of partially digested food.

REMARKS.—The points of interest in this case are the following.

1. The length of time which elapsed before the onset of the symptoms in the case of the man is probably accounted for by the presence of a quantity of food in the stomach.
2. The fact that so much strychnia remained in the stomach, two and a half hours after its administration, points to the importance of administering an emetic in such a case, even after the lapse of some hours. It would naturally be best to administer the emetic hypodermically, as there might be difficulty in getting the patient to swallow. The use of the stomach-pump would induce the tetanic spasms.
3. As regards the *post mortem* appearances, the points to be noted are: the persistence of the *post mortem* rigidity after considerable decomposition; the absence of clots in the heart; and the pale condition of the thoracic muscles.

WHAT IS THE FUNCTION OF THE CORPUS CALLOSUM?

By WILLIAM W. IRELAND, M.D., Preston Lodge, Prestonpans.

IN the BRITISH MEDICAL JOURNAL for May 24th, there is an abstract of a lecture on the Structure and Functions of the Brain in relation to Disease, delivered before the Faculty of Physicians and Surgeons of Glasgow, by Mr. D. G. Hamilton, Professor of Pathological Anatomy in the University of Aberdeen. The lecture seemed to promise some information about ... functions of the corpus callosum. The theory that it was a commissure for associating the two sides of the brain and bringing them into harmony, which, Mr. Hamilton tells us, has met with almost universal acceptance of late years, having never seemed acceptable to me, I was pleased to learn that some one was willing to consider afresh the question, What is the use of this mass of white matter? To this, comparatively little attention has been paid by experimental physiologists. When Professor Hamilton announced that he had investigated the matter for himself, and inquired par-

ticularly into the literature of the subject, and that he had confirmed and improved upon the observations of Foville and Gratiolet, the lecturer seemed to approach something interesting. After a description of the course of the fibres of the callosal tract (he omits all mention of cells or nuclei), he sums up with a number of assertions which do not seem to be clearly deducible from his premises, and which come into direct collision with what I have myself written. It is to be hoped that the interest of the subject is sufficient to excuse me in defending the following statement. "The function of the corpus callosum is unknown, and it is clear that its absence, uncomplicated with other deficiencies, is not sufficient to cause idiocy." (*Idiocy and Imbecility*, 1877, p. 68.) The lecturer says very distinctly that, "when the corpus callosum is congenitally deficient, persons in whom this defect occurs are more or less imbecile," and that, "whenever the destruction of the corpus callosum is extensive, it seems as if the whole internal economy of the brain were disturbed, and more or less mental alienation or idiocy follows." This would, of course, support his theory that the fibres of the corpus callosum "are part of the anatomical substratum of those faculties of the brain which may be termed psychical."

Congenital deficiencies of the corpus callosum are very rare. It is doubtful whether more than thirty cases have been described. I happen to have seen one, which was complicated with other deficiencies in the brain; and this is so generally the case that it is not safe to draw inferences from the want of the corpus callosum, since the incapacities observed during life may be owing to the abnormal appearances in other parts of the brain. I was able to cite two cases, observed by Dr. J. Sander and Professor Germano of Turin, where the corpus callosum was found to be entirely wanting, without any mental derangement or deficiency of intellect being observed during life; and after the book appeared, another case was published by Dr. G. Eichler. It was that of a man who died at the age of 45. The corpus callosum, fornix, and soft commissure were wanting, and the anterior commissure was somewhat larger than usual. There were some abnormalities in the gyri, especially the temporal and occipital. There was nothing particular noted about his intelligence. He could read, write, and count. He seems to have been a man of average intelligence, and had led a respectable life (*Archiv für Psychiatric*, Band viii, Heft 2). There is a report of Dr. Eichler's paper in the *Journal of Mental Science*, January, 1879, and in *Brain*, vol. i, p. 419.

The lecturer observes that in animals not possessing a corpus callosum the intelligence is feeble, or confined to a few definite circles of action; but as the callosal brain is reached, more or less improvement in the intelligence of the animal is noticed. Is this really the verdict of zoology? We thought that birds wanted the corpus callosum; but some birds, such as crows or parrots, are much more intelligent than many quadrupeds.

Professor Hamilton concludes: "Whether as yet unobserved morbid changes in the corpus callosum may throw any light upon those great blanks in our pathology, namely, mania in its various forms, melancholia, and, more especially, general paralysis of the insane, remains to be seen. It is possible that even a vascular change, an abnormal vaso-motor action influencing this part of the brain, might be sufficient to account for many forms of mental derangement."

I had no idea that the pathology of mania and melancholia were so ill worked out; and if Professor Hamilton will inquire into the pathology of general paralysis, he will find that, as far as our present means of investigation go, there is very little left to do.

COLOTOMY AND OSTEOTOMY.

By H. A. REEVES, F.R.C.S.Ed.,

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THESE operations are at present attracting surgical attention. As the introducer into this country of inguinal colotomy, and being second on the list of osteotomists, I feel called on, through recent publications, to record my experience regarding them. Sigmoid colotomy, though originally a French operation, never took root in France as a palliative in rectal cancer, or stricture with ulceration; but since the publication in the BRITISH MEDICAL JOURNAL, a few years ago, of my early cases, this operation is finding favour on the Continent, and also in this country. In that paper I pointed out the various advantages of inguinal over lumbar colotomy, and indicated the best mode of reaching the colon; and since then I have operated on eight other cases, making the total of sigmoid colotomies eleven in adults; if three in infants, done for imperforate rectum, be added, the number of my inguinal colotomies amounts to fourteen. During the past fifteen years, in addition to these, I have had occasion to perform thirty-nine lumbar