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.,
Surgeon to the London Hospital.

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

colotomies, and the result of these fifty-three operations, *i.e.*, thirty-nine lumbar and fourteen inguinal, is briefly this: ten out of the eleven sigmoid colotomies on adults lived for several months after the operation, one done *in extremis* at Dorking died on the third day after operation, with those symptoms of perforation which occur often in late colotomies.

The operations on infants were, as is the rule in such cases, unsuccessful. Of the thirty-nine lumbar operations, thirty-six survived the operation for periods varying from seven or eight months to as many and more years, according to the nature of the disease for which the operation was undertaken. I have recently given a clinical lecture on these cases at the London Hospital, and hope shortly to see it published, as in it fuller details of these cases, and of the merits and demerits of the various modes of doing colotomy, are given.

We are told not to hide our light under a bushel; so I may be excused for saying that recent publications concerning colotomy have afforded me a double agreeable surprise—first, that I come second, instead of, as I previously thought, fourth or fifth, on the list as regards the number of operations done; and, secondly, that my results are (until better be shown) first, as regards recoveries and duration of life after the operation. I believe the reason of this success to be that I advise early operation. Directly I find that there is malignant rectal disease, or any form of stricture with ulceration, pain, and loss of flesh, I urge immediate colotomy, provided the case be not favourable for excision. Of this operation I can only say, from the experience of seven cases, that I am not very favourable to it; and though I see a large number of cases of rectal disease and of rectal stricture (which is, unfortunately, very common in women) I very rarely see a case suitable for it, and the only cases which proved successful in my hands were three cases of epithelioma low down; in the four others recurrence, sooner or later, took place, and colotomy was subsequently performed in three of them.

For the benefit of patients, and, consequently, for the greater success of the operation, I trust surgeons will be guided by the result of my experience in early colotomy, and I feel sure they will soon be able to record equal, and possibly greater, success. It is necessary to speak clearly on this point; for in the last edition of Holmes's *System of Surgery*, in the article on Diseases of the Rectum, colotomy is very slightly alluded to, and looked on as a last resource, and it is just in these very cases that the operation is most unsuccessful. It may be as well to give recent proof of this.

During the last six weeks, I have seen five cases of rectal stricture, and have done four colotomies, two lumbar, and two inguinal. Three of these were hospital cases, and one was operated on at Arundel; three of the patients were females, and two males. In the fifth case, a male, I proposed colotomy, but as my senior was expected in the afternoon, the case was left for him, and, for some reason, the operation was not done. The man died early the next morning with symptoms of perforation, and the *post mortem* examination showed ulceration and perforation of the cæcum and peritonitis, so that colotomy would have had no chance. Another case recently occurred in the practice of a colleague in which lumbar colotomy was done, but the patient died some hours after, and in this case the cause of death was ulceration and perforation of the cæcum. I could relate others, but these are ample to show that late colotomy is as useless as any other surgical or lay proceeding to which the expression "too late" can be applied.

Of late, two cases of Macewen's osteotomy have been recorded, in one of which the popliteal vessels were wounded, and amputation, followed by death, was the end. In the second case the popliteal artery was divided, and subsequently tied, and the patient did well. These grave accidents occurred in the hands of skilful and experienced operators and are, of course, more likely to happen in inexperienced hands, so that I would again draw attention to the remarks I made some years ago as to the anatomical dangers inherent to Macewen's osteotomy, and, indeed, to all operations about this situation, and would again recommend diaphysal osteotomy, as pointed out in a short paper published a few years ago in this JOURNAL under the heading of Femoral (*i.e.*, about the junction of middle and lower thirds) Osteotomy. I always operate from the outer side, and if the operation be done according to the directions given in the paper alluded to, the plan is safe and simple. I have discussed the whole question of osteotomy and its various modes in a chapter of a shortly forthcoming book on *Practical Orthopedics*, and must refer to that for fuller details.

Colotomy and osteotomy form two of the most important practical subjects for discussion at the coming congress at Copenhagen. For this reason, and also because I desire again to point out the dangers inherent to lumbar colotomy and Macewen's operation, and to furnish proof of surer and safer roads, I have taken up the pen. I should, however, consider the communication imperfect were I to omit mention

of an important fact, which is, that my colotomies and osteotomies were done without Listerian precautions. I never adopt these, and if I may be allowed to say, and pardoned for saying it, I would ask the following pertinent (which some may think impertinent) question: Can any surgeon show better results?

I have never had a death from osteotomy, whereas several cases of death from the operation have been recorded, from some or other cause, after Listerism, and in several of these the case was complicated by suppuration.

SURGICAL MEMORANDA.

THE EXCISION OF PORTIONS OF TENDONS OF PARTIALLY PARALYSED MUSCLES.

BEARING upon this subject, it may be of interest to state that, in several cases where a muscle has been quite useless from partial paralysis, and where the foot has been cold and flaccid, I have found that simple subcutaneous section of a tendon has had the effect of rapidly increasing the warmth of the foot, and of so improving the nutritive condition of the muscle, that its functions have been restored.

One of the patients upon whom I thus operated I exhibited at a meeting of the Harveian Society last year. Mr. Jessop of Leeds first drew my attention to the fact that tenotomy could be performed with benefit under such circumstances. When there is redundancy of tendon, as in the cases already recorded, excision of a portion of the tendon is doubtless the better operation.

NOBLE SMITH.

THERAPEUTIC MEMORANDA.

THE USE OF SALICYLIC ACID IN THE TREATMENT OF LUPUS VULGARIS.

I HAVE for some time employed salicylic acid, in the form of ointment, as a remedy for eczema of the scalp, and impetigo contagiosa occurring in children, with the most satisfactory results, cases that have defied other treatment yielding rapidly to its agency, and I have been induced to make a further trial of it in other skin-affections.

By the kindness of Mr. Rigby, surgeon to the Doncaster Infirmary, I was permitted to employ it in a very bad case of lupus exedens, which had been for some time under his care.

The patient, a woman about 25 years of age, had her face terribly disfigured, the ulceration having destroyed one *ala nasi*, the whole of the cheek and eyebrow being also involved. She had been in the hospital before, and had improved under treatment with Donovan's solution and a visit to Harrogate. But on her return, although she was kept under observation and treatment, fresh tubercles developed, and the parts that had cicatrised soon became again involved, and she was re-admitted to the institution. I first tried an ointment of 15 grains to the ounce of vaseline, which was of no use; I then increased the strength to a drachm, and then to a drachm and a half to the ounce.

The ulcers soon began to heal, no fresh tubercles appeared, the cicatrices became soft and lost their shiny, unhealthy appearance, and the skin of the face is now almost sound. She was taking a mixture containing Donovan's solution and the liquor ferri dialysati. But as this had been administered without apparent benefit before admission, I think it is fair to give the credit to the external remedy. I have not heard of salicylic acid being employed before in the treatment of this particular disorder, and its action seems very satisfactory, especially as it does not appear to cause irritation.

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OBSTETRIC MEMORANDA.

FORCEPS.

THE suggestion of Mr. Cribb as to the introduction of the upper blade of the forceps is well known to me; and for more than twenty years I have practised it. It was shown to me nearly twenty-five years ago by the late Mr. J. Hutchinson of Manchester. It simplifies the operation considerably, and is very easy to manage after a little experience. Most practitioners have their own way as regards the after part of the operation. For my own part, I rarely or never "extract," but remove the forceps when the head is on the perineum, and let nature finish it. I have never, in a long experience of operative midwifery, had to stitch up a perineum.

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