List of some of the contributions to surgical literature by William Macewen, Lecturer on Surgery, Glasgow Royal Infirmary School of Medicine, and Surgeon to the Royal Infirmary, Glasgow: with comments by the medical press, and other published statements by surgeons on the ideas advanced and the work done by him.

Contributors

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Wellcome Collection 183 Euston Road London NW1 2BE UK T +44 (0)20 7611 8722 E library@wellcomecollection.org https://wellcomecollection.org BY WILLIAM MACEWEN, LECTURER ON SURGERY,
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WITH COMMENTS BY THE MEDICAL PRESS, AND OTHER
PUBLISHED STATEMENTS BY SURGEONS ON THE IDEAS
ADVANCED AND THE WORK DONE BY HIM.

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I. Address on the Surgery of the Brain and Spinal Cord.

Delivered at the special request of the British Medical Association at their meeting in Glasgow in 1888.

Printed in the British Medical Journal and in the Lancet, August 1888, and which also appeared, in whole or in part, in several American, French, German, and Italian medical journals.

The following account of the proceedings at the conclusion of the address is taken from the *British Medical Journal*, August 18th, 1888:—

THE PRESIDENT said that the demonstration of applause which had greeted the address almost obviated the necessity for a formal vote of thanks. He had been so greatly impressed with the splendid results obtained by Dr. Macewen, that he wanted in the original arrangements to take the whole Association to the Royal Infirmary, in order that Dr. Macewen might have given an address on his own ground; but that had been found to be impracticable, hence the arrangement for the delivery of the address in the Bute Hall.

MR. Jessop, in proposing a vote of thanks to Dr. Macewen, said that there was not an operation-room in the land, or even in the civilized world, where his name was not a household word. Not many years ago the sight of the deformed and maimed legs that were so common in large towns, the outcome of the industry of the country and the many homes without light and air, was really distressing to the surgeon, who could only, after a few attendances, hand over the cases to the surgical mechanician. Dr. Macewen had changed all that, and now when a deformed lad presented himself, the surgeon was actually pleased, inasmuch as surgeons were never so happy as when they could see something very bad which they could rectify. He was rejoiced to remember that Dr. Macewen was still a young man, and had a

great deal of excellent work before him in the future. His address showed that they had in him one of the most brilliant surgeons of the day; and he was sure that the members would think that the council had acted wisely in asking him to give them the result of his investigations. Dr. Macewen had also accomplished useful work in other directions. Those who had attended the Royal Infirmary would have seen cases of hernia in which he had performed some brilliant operations attended by a radical cure. They had all expected great things from Dr. Macewen, and they had not been disappointed, and he was quite sure that they would adopt the resolution which he proposed with the utmost enthusiasm.

DR. WARD COUSINS said that they had listened to a most characteristic and important address. He had a great admiration for Scotland, from which they had received some of the most startling improvements in modern surgery. When the history of the evolution of surgery in modern times should be written, the names of Scotch surgeons would assuredly adorn its pages, and among them none of them would be more illustrious than the name of Macewen of Glasgow. They all wished him a long life, that he might continue to cultivate these splendid, noble sciences which were so priceless a blessing to mankind.

The motion was carried with acclamation, the members standing and cheering repeatedly.

Leader from the British Medical Journal, August 11, 1888, on the above Address.

THE SURGERY OF THE BRAIN AND SPINAL CORD.

Dr. Macewen's Address "On the Surgery of the Brain and Spinal Cord," read at the Glasgow meeting, is in many respects the most remarkable contribution to surgical literature which the present day has produced. When we recollect how rare were the occasions on which a few years since even the most enterprising surgeons thought it justifiable to attempt any operation on the brain, and how exclusively such operations were restricted to dealing with the visible and tangible results of localised injuries, it seems almost magical to hear such a statement as

the following of the experience of a single surgeon, and to know that these operations were undertaken not only to relieve the immediate and direct effects of injury, but also as curative methods in the most various affections, some consequent on old injury, others owning no known cause. Here are Dr. Macewen's statistics :-- "Of twenty-one cerebral cases (exclusive of fractures of the skull or other immediate effect of injury) in which operations have been performed by me, there have been three deaths and eighteen recoveries. Of those who died, all were in extremis when operated on. Two were for abscess of the brain, in one of which the pus had already burst into the lateral ventricles; in the other, suppurative thrombosis of the lateral sinus had previously led to pyæmia and septic pneumonia. The third case was one in which there existed, besides a large subdural cyst over the one hemisphere, extensive softening at the seat of cerebral contusion on the opposite hemisphere, accompanied by cedema of the brain. Of the eighteen who recovered, sixteen are still alive in good health, and most at work, leaving two who have since died, one eight years after the operation, from Bright's disease, she in the interval being quite well and able to work; the other forty-seven days after the operation, after the abscess was perfectly healed, from an acute attack of tubercular enteritis."

The conditions which have rendered possible this great advance in surgery are stated by our author as two, namely, (1) the absence of consecutive inflammation of the brain and its membranes after operation, due to the improved operative methods of modern surgery; and (2) the possibility of inferring the locality of a limited irritating lesion in the accessible portions of the brain which has been brought about by the researches of modern pathologists, dating from Broca's discovery in 1861. Of these pathologists perhaps the first place is due to our countrymen, Hughlings Jackson and Ferrier, and it is only right to remember the great part which direct experiment has borne in producing this inestimable advance in surgery which has already achieved much in saving life, and what is even dearer than life, and which promises so much more in the future. These researches have established (to use Dr. Macewen's words) the great fact that "there are certain regions of the brain in intimate relation with the movement and sensation of certain parts of the body, which, in the presence of either irritative or destructive lesions, give rise to phenomena which are of the greatest diagnostic value."

It is this cardinal fact of which Dr. Macewen has been the first to make such bold and such successful use. His paper begins with a modest and succinct account of seven cases in his own practice between the years 1876 and 1883, in which limited lesions of the brain were accurately diagnosed and localised by their symptoms, and were exposed by operation, and the irritating material removed. In the first case the operation, though urged during life, was negatived, and was only performed after death; but the case is important as showing the reliability of the means of diagnosis, and must have powerfully supported the surgeon in advising subsequent operations. It was one of abscess in Broca's lobe, following an old injury. The other six cases were, one of traumatic ecchymosis of blood beneath the dura mater; one of idiopathic tumour of the dura mater; one of large cerebral abscess which before operation had burst into the lateral ventricle (death followed the operation, which was performed in extremis); one of traumatic effusion of blood, the locality of which was diagnosed from motor symptoms only, the seat of injury being unknown; one of syphilitic tumour; and one of extravasation of blood in the white substance of the motor cortex of the ascending convolution. With the one exception indicated, all these operations proved successful, and they all occurred before the case under the care of Dr. Bennet and Mr. Godlee, which attracted so much attention in London in 1884. With indisputable justice, therefore, may Dr. Macewen claim the proud distinction of having been the leader in this country, and we believe in the world, of this great advance in our art.

Of the future of cerebral surgery it is encouraging to find Dr. Macewen speaking with confidence. Obviously the great question is how far diagnostic signs are trustworthy. "First, are the localising motor phenomena reliable guides to the diagnosis of cerebral lesions situated in the motor cortex? My answer is unhesitatingly affirmative. Each case, however, requires to be studied on its own merits, the whole phenomena presented, the *unobtrusive* as well as the prominent features must be carefully searched for, the degree in which each is present must be accurately measured, and the whole

weighed and compared with former experience before drawing a conclusion."

"In many cases the evidences of focal lesions are so distinct that a diagnosis is easy; in others they are so intricate that a prolonged and minute investigation is necessary to decipher them, while there are still others in which the signs are so perplexing that at best an approximation only can be arrived at. To lay bare a certain known convolution on a cerebral surface and observe the results of its stimulation is an easier task than to take what appears to be a tangled skein of nerve phenomena, such as is presented by many lesions of the complex brain of man, and to relegate each to its true source and infer from a study of the whole what particular parts of the brain are affected."

Clearly, then, much caution, much careful study, and much experience are needed by all surgeons who venture on these operations. Dr. Macewen has shown unmistakably that he possesses these requisites; but his example is not to be lightly followed by persons who do not possess them, or the progress of this new branch of surgery will be checked by disasters which more mature wisdom and more caution would have avoided.

Dr. Macewen relates several interesting cases to show that "the motor and sensory phenomena form reliable guides to localisation of lesions in the central convolutions," and a most important and suggestive case to prove that "the diagnosis of cerebral lesions in non-motor regions may be made from sensory phenomena. A man who had received an injury about a year previously suffered from deep melancholy and strong homicidal impulses, relieved by paroxysms of pain in the head of indefinite seat. Though the pain was excruciating, he welcomed it, as it temporarily dispelled the almost irresistible desire to kill his wife or children or other people. Prior to receiving this injury he was perfectly free from impulses of this kind, and had led a happy life with his family. Behind the angular process of the frontal there was a slight osseous depression, which could not account for his symptoms. There were no motor phenomena, but on minute inquiry it was discovered that immediately after the accident, and for about two weeks subsequently, he suffered from psychical blindness. Physically he could see, but what he saw conveyed no impression to his mind. An object presented itself before him which he could not make out, but when this object emitted sounds

of the human voice, he at once recognised it to be a man, who was one of his fellow-workers. By eyesight he could not tell how many fingers he held up when he placed his own hand before his face, though by the exercise of his volition in the act, and by his own sensations, he was cognisant of the number . . . These phenomena gave the key to the hidden lesion in his brain. On operation the angular gyrus was exposed, and it was found that a portion of the internal table of the skull had been detached from the outer, and had exercised pressure on the posterior portion of the supra-marginal convolution, while a corner of it had penetrated and lay imbedded in the anterior portion of the angular gyrus. The bone was removed from the brain and reimplanted in proper position, after which he became greatly relieved in his mental state, though still excitable. He had made no further allusion to his homicidal tendencies--which previously were obtrusive-and is now at work."

A case such as this, is, indeed, a triumph of surgery, and one which a very short time since would have been regarded as a mere impossibility, but surgery has achieved such wonders lately that it is difficult to say now what is impossible.

Much more in Dr. Macewen's experience of cerebral surgery deserves quotation and remark, such as the possibility of removing large portions of the motor area of the brain; the method of avoiding inflammation and false hernia cerebri after operation; the reimplantation of bone to fill the hiatus in the skull left by injury or made by operation; and the aid to diagnosis which may be furnished by the percussion-note of the skull; but we must refrain.

As to the operative surgery of the spinal column, Dr. Macewen mentions six cases in which the posterior arches of the vertebræ have been removed, four for the relief of paraplegia caused by pressure on the spinal cord. In reference to this he remarks:—
"The spinal membranes and the cord itself can be exposed, and neoplasms and encroachments upon the lumen of the canal may be removed therefrom without unduly hazarding life. Such interference is unsparingly condemned by writers on the subject, their remarks, however, being applied to injuries, as no such operations have been hitherto contemplated in idiopathic cases. They contend that they are full of danger, being difficult, prolonged, and attended by profuse hæmorrhage; secondly, that the

operation could hardly benefit the patient; and, thirdly, that no one has yet been able to present a successful case. Each of those points has now lost its validity.

"The first operations of this kind were undertaken by me for the relief of paraplegia due to angular curvature of the spine. In such cases pressure may be exerted on the cord either by connective tissue neoplasms, or by direct displacement of the bodies of the vertebræ, both lessening the lumen of the canal."

He illustrates this point by the description of a case in which paraplegia, with incontinence of urine and fæces, was completely cured by removal of the laminæ of three dorsal vertebræ and a subjacent connective tissue tumour, and another similar case is referred to. Two similar cases, however, terminated fatally, in which the temperature before operation was irregular, indicating, it was thought, some activity in the tubercular disease at other parts of the cord. "Since this experience no case has been deemed fit for operation in which the temperature did not run an even, regular, and continuous afebrile course."

The other two cases were—one in which an abscess in the posterior mediastinum was successfully opened, and one in which paraplegia from traumatism was cured by elevating the arch of the twelfth dorsal vertebra and a subjacent mass of connective tissue.

"Here are, therefore," says Dr. Macewen, "six cases in which elevation of the posterior laminæ of the vertebræ has been performed. Four of these have completely recovered and two have died; one of those from extension of tubercular disease, months after the operation, and after the wound had healed, leaving one in which the operation possibly hastened the death of a patient, who was otherwise in a painfully helpless and hopeless condition.

"Such operations are now beginning to be practised by others. Mr. Horsley has within the last year published a successful case, in which a somewhat similar operation has been performed, for the removal of a small tumour of the theca, diagnosed by Dr. Gowers."

With these samples of Dr. Macewen's Address, our readers will not think us extravagant in saying that it marks an epoch in surgery, the initial stage of a branch of our art obviously destined to a glorious and beneficent future All honour to the surgeon who has so ably and so successfully led the way in this grand undertaking!

The Lancet's Leader on the Address on the Surgery of the Brain and Spinal Cord.

Dr. Macewen's address is worthy of unqualified praise. The subject, of which he is a master, has been argued with all the skill of a special pleader and summed up with the studied impartiality of an experienced judge. The profession has received by instalments the record of Dr. Macewen's experience in the operative surgery of the brain and spinal cord. It now has presented to it in a more complete yet concise form a recital of his practice. In his earlier passages he sketches the history of the development of the regional and local anatomy of the brain, and then proceeds to exemplify the way in which he has turned his knowledge of that anatomy to practical ends. It seems strange at first sight that cerebral surgery should have been neglected so long, for it is only within the last few years that anything has been attempted in this field except in cases of traumatism, and even then the guide to interference was the rough-and-ready one furnished by external appearances and general nervous derangement, rather than by a well-regulated study of "localisation." The success that has attended Dr. Macewen's operations on the brain, whether in cases of injury or idiopathic disease, has been, we might almost say, phenomenal, and our readers will understand this when they consider the extreme gravity of the symptoms, and the inherent difficulties that beset the necessary operative procedures. We are entirely at one with him in his protest against the indiscriminate performance of operations in all cases, even where a coarse anatomical lesion can be diagnosed and reached. A patient troubled with epileptiform seizures can scarcely be advised to barter his present infirmity for paralysis, which may be total and must be abiding, or, as Dr. Macewen pithily puts it, for the equivalent of amputation at the hip and shoulder joints, since this would be the result of removing large wedges of the cerebral cortex. We cannot recommend too highly the lecturer's honesty in publishing the fact that, having exposed

the brain, and found a widely and deeply extended lesion, he has desisted from completing the operation. Nor is the extent of removal of the brain-substance the sole factor in the determination of the performance or avoidance of an operation, since, as Dr. Macewen shows, after the brain has been exposed, even though healing goes on uninterruptedly and well, the cerebral substance is likely to remain anchored to the skull directly or by the medium of its adherent membranes. In this way disturbance of the cerebral circulation is likely to arise, the brain being no longer free to ride upon its water bed, and to adjust itself to the varying strain that muscular action is continually imposing upon it. We are glad to see it insisted upon that false hernia cerebri consecutive to encephalitis is not necessarily dependent on the septic condition of a wound, but that it may arise from the irritation caused by the tension of tumour. Dr. Macewen states a case where, on incising the dura mater over a new growth, the surrounding tissue affected by red softening at once protruded through the trephine aperture. In conclusion, we make favourable mention of the author's discriminating remarks upon the question of opening the spinal canal for the removal of a tumour or inflammatory neoplasm, or for elevation of bone depressed by injury or misplaced by caries. It is obvious that in such cases a careful consideration of the nature and duration of the symptoms, of the relief likely to be attained, and of the chances of failure or fatality, must be made before the surgeon is justified in undertaking what must be admitted to be a dangerous operation .--The Lancet, August 18th, 1888, vol. II., p. 329.

Leader in the Glasgow Medical Journal.

Dr. William Macewen delivered an address on the "Surgery of the Brain and Spinal Cord," which, as has been truly said, by the British Medical Journal, "marks an epoch in surgery, the initial stage of a branch of our art obviously destined to a glorious and beneficent future." The address was delivered to a crowded audience, who followed the speaker with intense interest from beginning to end, and who on the motion of a vote of thanks awarded him a mead of applause which, it is not too much to say,

amounted to an ovation. By a devotion to work and a love for the observation of nature, which remind us strongly of the genius of John Hunter, Dr. Macewen has won for himself a foremost place in the front rank of surgery; and the honour accruing to the Glasgow Surgical School by the ever memorable labours of Lister has been well maintained by the more recent researches of Macewen.—Glasgow Medical Journal, September, 1888, p. 248.

Leader from the MEDICAL PRESS AND CIRCULAR.

The most important medical event of this year has been the meeting of the British Medical Association in Glasgow. meeting was a large one, and was on the whole a marked success. On the whole, the papers read were of a high order, and the scientific value and importance of the meeting was thus maintained. The meeting was presided over with great and acceptable ability by Professor W. T. Gairdner, who delivered an excellent address on "The Physician as a Naturalist." The address in Surgery was delivered by Professor Sir George H. B. Macleod. His subject was "The Progress of Surgery during the Last Half Century." The subject was treated of in an eloquent and exhaustive manner, and was quite worthy of the reputation of the distinguished speaker. Dr. Clifford Allbutt of Leeds, in the "Address on Medicine," was quite up to his reputation of one of the most cultured of English physicians. Excellent as these addresses were, it is indisputable that the address which riveted most attention was that by Dr. William Macewen on certain points in Surgery to which he had devoted special attention. Results have been obtained by Dr. Macewen which would never have been dreamt of a quarter of a century ago, and which must cause the older school of practitioners to remodel their physiology. - Medical Press and Circular, Retrospect for 1888.—January 2, 1889.

Extract from the Presidential Address delivered at the opening of the Section of Otology, British Medical Association, Glasgow, 1888, by Thomas Barr, M.D.

"We are proud to be able to claim for this country the merit of demonstrating within the last two years that without any carious aperture or superficial swelling on the surface of the head to guide the surgeon as to the seat of the abscess, but simply and solely from the local and general symptoms manifested by the patient, a collection of matter in the brain or inside of the skull may be diagnosed, reached, and drained with complete success. In this way a number of patients have been restored to health, even from the very jaws of death. Dr. William Macewen, of this city, has operated in seven cases where he trephined and drained abscesses in the temporo-sphenoidal lobe, by which operation he has saved five lives.

"You will, I trust, have the opportunity of seeing two of Dr. Macewen's cases; the one having been treated eighteen months ago, and the other three months ago. In one case operated upon by Dr. Macewen, while the results of the operation were entirely satisfactory, the patient, a little girl, died some time after from peritonitis, and I had the opportunity of seeing the brain, the cicatrix marking the position of the abscess, which after being drained had entirely healed, leaving only the cicatrix behind.

"The general surgeon has thus come to our aid, and it is for us now to earnestly co-operate with him, and to watch most carefully every case of purulent ear disease which may develop symptoms of extension to the interior of the cranium, and, without undue delay, to adopt these operative measures which, as experience has now so brilliantly proved, offer in competent hands a fair chance of success."—British Medical Journal, Sept. 1, 1888, page 473.

The International Otological Congress held at Brussels in September, 1888.

Dr. Thomas Barr (Glasgow) read a paper on the surgical treatment of cerebral abscess resulting from ear disease, in which he related two cases which had been successfully operated upon by Dr. Macewen. This paper attracted considerable attention, and on the proposal of Professor Guye, the English School of Surgery was congratulated upon its success.—London Medical Record, Oct. 20, 1888.

Dr. Macewen also received from Brussels the congratulations of the Otological Congress. II. Dr. Macewen gave the following Surgical Demonstrations before the British Medical Association on 8th, 9th, and 10th August, 1888, the first and last in the Royal Infirmary, and the one on the 9th inst. in the Bute Hall, University, Gilmorehill, on Thursday, at 10.30.

On Wednesday, at 9 a.m.:-

- a. (1) Demonstration on radical cure of hernia by internal abdominal peritoneal pad and restoration of the valved form of the inguinal canal. (2). A specimen of parts involved in left inguinal hernia removed post mortem from a man upon whom the above operation was performed four years previously, and who until his death by rupture of thoracic aneurism, was able to follow his vocation as a carter without truss or any external support applied to the inguinal region. (3) Some cases in which this operation has been performed.
- b. A series of cases of excision of joints—hip, knee, elbow, ankle, etc.
- Demonstration in Bute Hall, University, Gilmorehill, at 10.30, on Thursday, on conclusion of Dr. Macewen's address.
- (1) Boy operated on for Paraplegia due to pressure from neoplasm in Pott's disease. (2) Man operated on for Paraplegia, arising from traumatism. (3) Girl—protospasm of Hallux, from whom tumour was removed from brain. (4) Man-protospasm originating in facio-lingual centre, from whom cyst was removed from brain. (5) Manspasm originating in facio lingual centre-removal of intracranial effusion of blood. (6) Man-brachial centre -removal of area affected with encephalitis round blood clot. (7) Boy—brachio-crural centre—cyst removed from brain. (8) Boy—protospasm of facial and brachial muscles -removal of subdural cyst, and spiculum of bone driven into brain. (9) Case of cerebral abscess cured by operation. (10) Case of cerebral abscess cured by operation. (11) Boy whose left frontal and parietal bones were reimplanted after injury, a mosaic work being formed. (12) Boy whose humerus has been restored by bone grafting.

On Friday, 10th August, at 9 a.m. in Royal Infirmary :-

- a. Gave a demonstration on Osteotomy. (1) Performed supracondyloid osteotomy for double genu valgum. (2) Showed lower third of femur removed from body of man upon whom Dr. Macewen performed ten years ago his first supracondyloid osteotomy for genu valgum, and who until a few months prior to his death from enteritis (tubercular) had been for fully nine years regularly at work as an iron moulder. (3) A series of 56 casts illustrating bow legs, knock knees, tibial curves, and other surgical affections, photographs, etc. (4) A series of cases upon which osteotomy has been performed.
- b. Cases of fracture of patella treated by elevation of the structures intervening between the bones and then by suturing the fragments.
- c. Cases illustrating the growth of bones without periosteum.
- d. Dislocation forward of wrist.
- e. Two cases of disarticulation of hip.
- f. Urethrectomy for stricture of urethra.
- g. Specimens illustrating a special mode of treating large internal aneurisms.
- h. Chromic catgut, chicken bone drainage tubes, dressings, etc.

Extract from the British Medical Journal, August 11, 1888, p. 325.

"The address given on Thursday by Dr. Macewen on his recent surgical investigations attracted a large audience, and was received with enthusiastic applause.

"After his address, Dr. William Macewen gave a demonstration of cases so remarkable that it alone would suffice to render the Glasgow meeting memorable in the annals of surgery. Many of the patients whose cases had been described in the address were present, but the many eminent surgeons who attended were greatly interested also in the examples of re-implantation of bone. The head cases afforded many instances, but the most remarkable was a boy, in whom the whole shaft of the humerus had been reformed from grafts, forming a useful limb. The audience was large, and Dr. Macewen was loudly applauded, and received numerous congratulations on his brilliant results."

Extracts from the Cameron Lecture delivered at Edinburgh University, by Dr. D. Ferrier, on Cerebral Localisation in relation to Therapeutics. Feb. 26, 1892.

"I might quote numerous examples, . . . but a single one reported by Macewen will suffice." (Here follows précis of case on which Dr. Ferrier makes the following comments.) "No more triumphant vindication than this could be given of the surgical value of cerebral localisation; for a reliance merely on external indications would in all probability have sacrificed the life of the patient or resulted in incurable infirmity. The necessity and value of prophylactic cerebral surgery have also been emphasized and accentuated."—Edin. Medical Journal, April, 1892, p. 890.

"Surgeons who had trephined for traumatic epilepsy had contented themselves with merely opening the skull, and had shrunk from opening the dura mater or operating on the brain itself. This which constitutes the new departure in cerebral surgery is the direct result of the new cerebral physiology. Though I had on purely experimental grounds—the result of special researches on this subject in conjunction with my colleague, Professor G. F. Yeo (Brit. Med. Assoc., 1880)—strongly advocated this procedure (Marshall Hall Oration, Med. Chir. Society, 1883), the honour of having actually led the way in human surgery belongs to our countryman, Macewen of Glasgow. In his brilliant address at the meeting of the British Medical Association in 1888 he gave the details of many cases in which, during several years previously, he had performed operations on the brain, guided by the principles of cerebral localisation. Out of 21 cases he had operated successfully in 18, and of those who had died all were in extremis when operated upon. The example set by Macewen has been followed by surgeons in every part of the world, and cases are being continually reported in the medical journals at home and abroad." -Edin. Med. Journal, April, 1892, p. 892.

III. OBSERVATIONS CONCERNING TRANSPLANTATION OF BONE.
ILLUSTRATED BY A CASE OF INTERHUMAN OSSEOUS TRANSPLANTATION, WHEREBY OVER TWO-THIRDS OF THE SHAFT
OF A HUMERUS WERE RESTORED.

Read before the Royal Society, London, May, 1881, and published in the *Proceedings of the Royal Society*, No. 213, 1881.

"De la Transplantation des os. Expériences de Transplantation Osseuse Inter-humaine."

(M. W. Macewen.) This was received by the Académie des Sciences—séance du 20 Juin, 1881—and published in the Comptes Rendus des Séances de l'Académie.

The former communication was commented on by Mr. Busk Mr. Bowman, Prof. A. Thomson, and Prof. Huxley. The latter was discussed by M. Ollier in the *Académie des Sciences*, Paris.

The following is an extract from Prof. Allen Thomson's speech on the paper before the Royal Society:—

Dr. Allen Thomson said that "he gladly took occasion to express his satisfaction with the important paper which had been communicated by his friend and former pupil, Dr. Macewen, and which had described so well the happy result of a novel and ingenious experiment in practical surgery.

"It was obvious from the careful statement made by the author, that however near to success previous attempts at the transplantation of bone have been in some animals, nothing deserving the name had been arrived at in the human subject; and so remarkable was the success which had been attained in this case, that it appeared almost certain that if the proceeding could be repeated, so as to become a practical method, as appeared in every way probable from Dr. Macewen's statement, a most important improvement in surgery, amounting in fact to a great triumph over the most severe and hitherto hopeless defect following upon the loss of the shaft, or a large portion of bone by necrosis would be brought about.

"The ingenious adoption of the plan of minute subdivisions of the pieces of bone accompanied by their periosteum which were to make up the mass of bone substituted for that lost from disease, was interesting, not only in its practical application, but also in its relations as a physiological experiment; and the process of reasoning which had suggested this expedient to Dr. Macewen gave his paper high value as a contribution to physiology as well as to practical surgery."

In a note communicated to the Académie des Sciences, Paris, by M. Ollier, "Sur les Greffes Osseuses," reference is made to the above as follows:—

"M. Macewen, de Glasgow, vient de confirmer de la manière la plus éclatante la réalité de la greffe osseuse sur l'homme il a eu de plus l'idée de la diviser en petits fragments. Ce procédé de lui a parfaitement réussi."

In a Leader in the Lancet, especially devoted to this communication, the following appears:—

"Great interest attaches to this case, which is the first of the kind recorded, and Dr. Macewen is entitled to warm praise for devising and carrying to such a successful issue the many details necessarily involved in its management."

The Lancet's "Annus Medicus," 31st December, 1881, contains the following:—

"In quite another department of surgery we have to notice two additions to our means of assisting nature in the repair of injuries, both coming from Scotland. Dr. Macewen has shown us that bone can be transplanted, and will not only live, but excite the formation of a lost bone."

The case of transplantation of bone is noticed as one of the events of the year in the Surgical Retrospect of the Medical Times and Gazette, 31st December, 1881.

It is further noticed in a Leading Article in the Medical Press and Circular, 1st June, 1881, from which the following is quoted:—

"The reproduction of bone from grafts has been again and again tried, but until lately, no one has been able to record a successful attempt in this direction. As was the case with skin grafts, difficulties arose which had to be vanquished one by one; but at length a veritable case of new growth from grafts has been

recorded, the successful operator being Dr. Macewen of Glasgow." [Here follows particulars of the transplantation.] "The history of this first case tends to prove that there is nothing to prevent this method of repair from being extensively resorted to in the future. That it opens up a prospect of far reaching benefits is at once plain. . . ."

This memoir on Osseous Transplantation was translated into French by the direction of the Editors of the Revue de Chirurgie,

and appeared in that Journal in January, 1881.

It is reviewed in the Revue Scientifique, 25th March, 1882, No. 12, p. 379.—"Je signalerai dans la Revue de Chirurgie du 10 Janvier, 1882, un intéressant travail de M. W. Macewen, chirurgien et professeur à Glascow. Ce travail est relatif à la Transplantation Osseuse." . . . The concluding sentence is:—"C'est dire que la pratique de M. Macewen mérite des encouragements sérieux."

I Fondamenti della Chirurgia Moderna e dell' Insegnamento Clinico. Prolusione al corso di clinica chirurgica nella R. Universita di Parma, letta dal Professore Andrea Ceccherelli il di 4 Dicembre, 1882.

Translation.—Page 11. At present the most important question is bone grafting, the transference of a piece of bone from one part to another, with the view of fixing itself there, growing and forming at last one mass with the other bone to which it has adhered. To Ollier and Macewen belong the honour of introducing this method, which has already passed from the sphere of experimental physiology into that of clinical practice.

Extract from the Address in Surgery at the British Medical Association, 1882, by Sir William Stokes, F.R.C.S.I., Professor of Surgery, Royal College of Surgeons, Ireland, President of the Pathological Society of Ireland.

At page 259 he refers to Macewen's views on periosteum.

At page 260 he states as follows:—As regards bone transplantation I cannot speak from any personal experience, but in connection with this all-important subject I must allude to the

great stride made in this direction by Dr. Macewen of Glasgow The case of inter-human osseous transplantation, in which over two-thirds of the humerus was restored, and an account of which was communicated to the Royal Society last year, is one which must stand out in bold relief in the history of this new departure in operative surgery, one which is with many others an outcome, indirectly perhaps, but not the less a result of antiseptic surgery. From the experience derived from observing the progress towards good union, and without pus production of bad compound, comminuted fractures, when pieces of bone completely separated, and even detached from periosteum, have, after being antisepticised, been replaced, lived, and eventually reunited to the neighbouring osseous structures tends, as Macewen has pointed out, to show the probability of transplanted bone living. . . . The case, however, which I am glad to say I had the opportunity of examining, is so pregnant of interest, and so suggestive, that it must serve as an incentive to further effort, to guide and encourage those working in this direction .- British Medical Journal, August, 12, 1882. Read before the British Medical Association.

IV.—The Pupil in its Semiological Aspects.

The International Journal of the Medical Sciences, July, 1887.

The paper is noticed in many foreign journals, and it is translated in full into Portuguese.

- O Correio Medico de Lisboa.—A pupilla nos seus aspectos semeiologicos, por William Macewen, cirurgião e lente de cirurgia da Real Enfermaria, e cirurgião do Hospital das creanças, em Glasgow.
- V.—Two Papers on "Intra-Cranial Lesions—illustrating some points in connection with the Localization of Cerebral Affections and Antiseptic Trephining."

Published in the Lancet, 24th September and 1st October, 1881.

This work is referred to in the following way in a Leader in the British Medical Journal, 26th November, 1881:—

"The work of Hughlings Jackson and of Charcot, leaders of the school of nerve pathology in their respective countries, has been in strict correlation and interdependence with the work of Fritsch, Hitzig, and Ferrier. They have been with the first to appreciate critically and to apply at the bedside the physiological teaching of the laboratory. Among Surgeons, Lucas-Championnière in France, and Macewen in Glasgow, have been equally prompt and successful."

In a Leader in the Lancet on the "Annus Medicus, 1881," there is the following:—

"The surgery of the nervous system also shows some advances. The experiments of Hitzig and Ferrier are bearing fruit, and are enabling surgeons to localize with precision lesions which antiseptic surgery can relieve. The cases reported by Marshall and Macewen bear witness to this fact, and they are but the first fruits of a rich harvest to be reaped gradually as our knowledge of cerebral localization becomes more perfect and general."

VI.—PAPER ON OSTEOTOMY FOR GENU VALGUM,

Prepared at the request of and read at the International Medical Congress, Copenhagen, in August, 1884. The paper is included in the *Transactions of the International Medical Congress*.

The following précis of the proceedings appeared in the British Medical Journal, August 23rd, 1884:—

International Medical Congress, Copenhagen, August, 1884.—Macewen's Operation for Genu Valgum.

Interesting and important discussions arose on the paper of Dr. Macewen, of Glasgow, on the operation for genu valgum, this particular debate being remarkable for the almost complete renunciation of their own methods by other surgeons in favour of Dr. Macewen's Osteotomy for Genu Valgum.

Discussion on Dr. Macewen's Paper-

Professor Ogston (Aberdeen) said he had previously operated by a method which had been called by his name, and it was, he thought, now time that some conclusions should be come

to concerning the various methods of operating for genu valgum. There had now been sufficient time given and sufficient experience of these operations to enable surgeons to arrive at some definite understanding regarding them. He had himself operated by Macewen's method a considerable number of times, and in such a way as to enable him to form a definite opinion on comparison of the methods. He had operated on one side of the body by his own method, and on the other side by Macewen's operation, exactly as described by its author; and he was forced to come to the conclusion that for simplicity and good result Macewen's method was better than that which he had himself advocated. He had not for himself altogether given up his own operation, chiefly because when one got into the habit of doing a particular operation, one did not like to throw it overboard altogether, being familiar with it. But he had for some years past told his students that Macewen's operation was the best, and he wished to make to that meeting of the Congress a similar announcement. He would advise every person who wished to osteotomize for genu valgum to adopt it in preference to his own (Dr. Ogston's). He had found that the German surgeons, even those who had at first adopted his own operation enthusiastically, had now given it up in favour of Macewen's, as the better and simpler operation of the two.

Professor Chiene (Edinburgh) said that after what he had heard, he thought it right to state that although he could not go the length of Professor Ogston, in entirely throwing up his own operation, still he would give Dr. Macewen's operation a fair trial on his return to Edinburgh. He thought that in all likelihood he would be able to report as favourably as Professor Ogston had done concerning it. It was, however, after all, the profession that were the judges of the merits and demerits of these operations; and they had seen from the statistics, which had been given in that section, and he also knew it to be the fact, that his own (Mr. Chiene's) operation, whatever he might think of it himself, had not commended itself to the profession generally.

Professor Schede (Hamburg) said he had put forward an operation for genu valgum which had gone by his name, and which he still practised in some cases. But in practising osteotomy for genu valgum he had not done so in the way he had adopted at first so often as he had previously done, but had

substituted for his own the operation of Macewen, and had by that method obtained excellent results. He thought in many instances that the tibia was involved, and he, therefore, in these cases, performed his own operation. But there was no doubt that there was a large number of pathological points showing that the femur alone was involved in a great many cases, and in some equally so with the tibia. He differed with Dr. Macewen in this respect, that in doing his operation he did not use several chisels, as was recommended in Macewen's work on Osteotomy, but only one, thinking the withdrawal of the instrument from the wound was a serious matter, inasmuch as it sometimes led to a disturbance of the parts, and to a difficulty of reintroduction of the instrument. But along with all German surgeons he accepted Macewen's operation.

Mr. Bryant (London) said he thought the section, after hearing what had been said, would scarcely find it necessary to discuss further the relative value of the operations. They would all agree that Macewen's operation had been proved to be the best by statistics, and also by the fact that the authors of the other methods had now practically given them up. He must say for himself that he had used Macewen's operation many times with very great success, and it was gaining ground where previously Ogston's operation had been practised. He was sure the section would endorse what had been said about Macewen's operation being the best one; but he could not sit down without expressing the very great pleasure he felt at the manner in which the other gentlemen had given up what he might call their pet operations. Professor Ogston had done this with the greatest possible grace, and he was sure the section would award him and the others a vote of thanks for the manner in which they had acted.

Leading Article in the Lancet, October 11, 1884, on Osteotomy.

"Our readers will have noticed that the treatment of genu valgum by osteotomy was one of the subjects specially chosen for discussion at the recent meeting of the International Medical Congress at Copenhagen. Fortunately, Dr. Macewen was chosen to introduce the subject, and we were able to give his paper in full in our columns a fortnight ago. He has from the first

been most honourably associated with this department of surgical practice, and the record he was able to give of his results was truly remarkable. We must refer our readers to the paper itself for all the details of the picture, and must merely repeat here some of the leading facts. Dr. Macewen has performed Osteotomy for genu valgum 820 times, and in 810 instances has performed the supracondyloid section of the femur which bears his name. Death has followed the operation in five cases, but in no one instance was it directly traceable to the operation. Suppuration occurred in eight instances, but during the last three years in all the cases the wound has healed without the formation of pus. In all cases the operation has effected a correction of deformity and improvement in the strength and utility of the limb, while relapse, even to a slight extent, was only observed in one or two. The records of other varieties of osteotomies for genu valgum are also very good, but wecannot doubt that Dr. Macewen's supracondyloid operation is destined to supersede them all on account of its safety and success, and also because it appears to be founded on more correct pathological data than its rivals.

"It is surprising to notice with what rapidity osteotomy has been adopted into general surgical practice. Dr. Macewen speaks of having performed it 1800 times, and there are other surgeons who can record their cases by hundreds. This fact is one of the strongest proofs of the great advance of operative surgery, and especially of the treatment of recent wounds. That one surgeon can record a series of 1800 compound fractures—for that is the effect of the operation-without a single instance of pyaemia, septicaemia, or of any fatal wound complication, is a fact that nothing but the more generally known results of scientific wound treatment would make credible. The operation was at first viewed with suspicion by many surgeons, and those who practised it largely were thought to employ it with unnecessary frequency, being tempted to accomplish quickly what might be attained by other and milder measures at an expenditure of more time. This was no new experience, but only an expression of opinion of the two great surgical parties that always exist. We see no reason why osteotomy ought to be abused in this manner more than many another surgical procedure, and perhaps there is quite as great a danger of withholding from a patient the advan-

tage he might derive from the operation were the surgeon better versed in its detail or more confident of its value. Dr. Macewen insists that the operation should never be performed until after the stage of ramollissement has passed off, and in this he will, of course, be supported by every careful surgeon. The earliest age at which he has operated for genu valgum has been seven years, and he has extended the advantages of the operation to patients as old as forty-seven. From the very large number of cases recorded by some surgeons, and their remarkable success, it is not allowable to infer that the operation is devoid of difficulty or of danger, and already instances have been published of mishaps, owing to neglect of proper precautions. If the chisel be insecurely held, or driven in a wrong direction, or the section of the parts be made at a wrong-level, it is not surprising if the results differ seriously from those obtained when all those precautions are duly observed. The reason why Dr. Macewen and others can show an almost unbroken success in their long list of cases is that each case has been the object of special care; familiarity with the details of the operation has not been allowed to beget neglect of any necessary precaution. Those who would attain like success must adopt the same means, must regard osteotomy as an operation demanding special care in its management, and not as a simple 'chipping of a bone' which can be accomplished in any fashion.

"The large number of cases recorded by Dr. Macewen, Dr. Ogston, and other surgeons, has now settled the position of this operation as far as statistics can do it. The safety of the procedure has been abundantly demonstrated, and it is only necessary to insist upon the importance of carefully observing all the precautions indicated by experienced operators."

VII.—TREATISE ON OSTEOTOMY.

Osteotomy, with an inquiry into the Ætiology and Pathology of Knock Knee, Bow Legs, and other Osseous Deformities of the Lower Limbs.

London: J. & A. Churchill. 1880. Pp. 181.

German Translation.

Shortly after the issue of this Work, Dr. Richard Wittelshöfer

of Vienna requested, through Dr. Mickulicz of Vienna, permission to translate and issue a German Edition. This having been accorded, a GERMAN EDITION was issued at Stuttgart.

Die Osteotomie mit Rücksicht auf Ætiologie und Pathologie von Genu Valgum, Genu Varum, und Anderen Knochenverkrümmungen an den Unteren Extremitäten Von Dr. William Macewen, Professor der Klin. Chirurgie des Königl. Krankenhauses in Glasgow.

Autorisirte Deutsche Uebersetzung herausgegeben von Dr. Richard Wittelshöfer, in Wien.

Verlag von Ferdinand Enke, Stuttgart, 1881.

French Translation.

Toward the end of the same year Dr. Albert Demons of Bordeaux requested the liberty to translate and issue a French Edition.

Ostéotomie avec Recherches sur l'Étiologie et la Pathologie du Genu Valgum, du Genu Varum et des autres Difformités Osseuses des Membres Inférieurs. Par William Macewen, Chirurgien et Professeur de Chirurgie Clinique a l'Infirmerie Royale de Glasgow.

Traduction et Notes par Albert Demons, Chirurgien de l'Hôpital Saint André, et Professeur Agrégé a la Faculté de Médecine de Bordeaux.

Paris: G. Masson, Editeur. 1882.

Italian Translation.

Osteotomia con Ricerche sulla Eziologia e sulla Patologia del Ginocchio valgo, del Ginocchio varo, e delle altre Deformità Ossee delle Estremità Inferiori, per William Macewen, M.D., Chirurgo e Professore di Clinica Chirurgica all' Infermeria Reale di Glasgow. Prima Versione Italiana autorizzata dall' autore, con Prefazione e dati statistici del Dott. Lampugnani Carlo, ex-Assistente del Dott. Margary.

The dedication of the volume is as follows:—Alla Memoria di Fedele Margary, questo libro che ricorda i trionfi del Macewen d'Italia, dedico con affetto di allievo, con orgoglio di Assistente.

Russian Translation.

The principal portions of the work are translated into Russian by Dr. Traube, Professor of Surgery in Warsaw.

Swedish Translation.

The details of the operation for Genu Valgum, introduced by the author, are translated into Swedish by Dr. Rossander, Professor of Surgery, Stockholm.

Roumanian Translation.

A translation into Roumanian has been published in Bucharest, to which the following conclusion is formulated:—In genuchiul valg, osteotomie atinge, ca să dic așa, apogeul resultatelor favorabile. In acestă deviatiune, mai cu seamă osteotomie supracondilienă a lui Macewen, este acea care se aplică într'un mod aprope sigur și care nu aduce nici o complicațiune. Vedută, bună de imprimat, Presedinte Dr. Severeanu. Vedut Rectorele Universitătei, Dr. I. Zalomit.

REVIEWS ON THIS WORK.

"This book is worthy of the closest study by surgeons. It deals with a subject in which great advances have been made of late years. It is the work of a gentleman who has made valuable contributions to its literature, of one who evidently writes from an experimental knowledge of the matter.

"Dr. Macewen—and it is a great pleasure to an American to be able to speak of so good a surgeon as doctor—writes in a singularly simple and unpretentious way, which makes the reader feel as if he was being talked to, and at once brings him into close sympathy with the writer. [Then follow four pages of extracts.]

"We have sufficiently expressed our opinion of the value of this book. Its appearance of candour and fairness must commend it to every one who studies it, and it is based upon such an amount of experience as entitles the conclusions of its author to most respectful consideration. No one will read far into it without seeing that the author's object has not been to make a book, but that he has written because he has something to say. He has said it well, and the profession is a gainer by what Dr. Macewen has written. There are very many new books; but it is our fortune to meet with few that are like this one, a fair statement of original work and accurate observation, and therefore of great value."—The American Journal of Medical Science, July, 1881; pp. 177-182.

"Dr. Macewen has operated on 367 limbs affected with knock-knee. In no case has he lost a patient from the operation. Several of the woodcuts in this book show the excellent result that follows after the supra-condyloid operation, which method, devised by himself, he believes to be the best. After such an extensive acquaintance with knock-knee and other deformities of the lower limbs, we must necessarily read with interest Dr. Macewen's opinion on the causation of these deformities."

"Dr. Macewen is an earnest follower of Lister's treatment, and believes that 'what the subcutaneous principle did for tenotomy antiseptics has done for osteotomy.' After operating on a very large number of cases he is fully justified in believing 'that by a strict observance of antiseptics, osteotomy may be performed with perfect immunity from inflammatory products, and a compound incision or fracture of bone may be regarded as a simple one.' Dr. Macewen's success seems to us to be one of the most important supports which Mr. Lister's doctrines have yet received in the domain of practical surgery. Dr. Macewen's remarks on the method of operating and the instruments used are worthy of the most careful consideration, and if surgeons adopt his method of relieving the deformity, they should take great care to follow his instructions to the letter. He is justified in asking this when his invariable success is taken into consideration."

surgeon before he performs osteotomy in knock-knee. The most valuable portion of the work is that part which describes Dr. Macewen's operation. . . . It may be that Dr. Macewen's method will ultimately turn out to be the best. In the meantime it is not proved, although there can be no doubt of this, that Dr. Macewen's great success, of which he and the Glasgow School of Surgery have very great reason to be proud, must weigh greatly with surgeons in coming to a conclusion on the best way to relieve a distressing and common deformity, to which so many of the poorer classes in our large manufacturing centres are subject."—

Edinburgh Medical Journal, December, 1880; pp. 546-548.

"Dr. Macewen's book will be read with interest and advantage by all practical surgeons. . . Dr. Macewen furnishes facts sufficient to startle many a practical surgeon"—[here follow Macewen's statistics]. "In cities where rickets is endemic, surgeons already know, and are familiar with many of these facts, for the operation and its successes are already well known to them."

"Some years ago any surgeon who proposed such treatment would have been condemned as reckless, and rightly so, for the results of the present day could not have been then obtained." 'The times are changed and we are changed with them.'"

"Dr. Macewen gives in clear and graphic language the description of the details of his operations. All these details the reader who wishes to profit by Dr. Macewen's book must study the original; to quote from the author would, if our review were to give useful information, require that we quoted the practical chapters at length; to abridge the author's description would be impossible." — Dublin Journal of Medical Science, Dec., 1880; pp. 508-510.

"Whatever may be the exact conditions existing in genu valgum, the malady can be undoubtedly remedied by an osteotomy through the lower end of the shaft of the femur, as first advocated and practised by Dr. Macewen, and performed several hundred times with only a fatality of three, and these due to causes unconnected with the operations. . . . The results here recorded are ample proofs of the dexterity of the operator and the efficacy of Listerism."—London Medical Record, 15th March, 1881.

"It may as well be said at once that Mr. Macewen has produced a creditable, impartial, and intelligible work, in which little of moment has been omitted. His language is that of boldness and honesty, and can nowhere be charged with being egotistical, although this might well have been pardoned in one whose name is so intimately connected with the osteotomy of today."

"Mr. Macewen has carefully studied the materials he disposed of, on purpose to improve the knowledge we previously had, and has furnished many new, full, and strikingly interesting chapters, regarding the effects of chronic diseases, epidemic diseases, maternal health, etc., on the production of such deformities." "In the part of his work devoted to the treatment of deformities by osteotomy, Mr. Macewen is singularly just and impartial. He gives due prominence to the opinions and works of others, who have also studied the subject often in opposition to himself. His description of the operations of others and of his own operations are very lucid and happy; not an ambiguous phrase or word mars the pleasure of the reader, and no second glance is needed to assist the understanding. The writing is here indeed excellent; although we may differ from him in some of his statements, it would be unfair to mix the praise which it must command with a hint of any unimportant personal difference of opinion." "We feel that, on the whole, the verdict of the profession regarding it will be an eminently favourable one."—Glasgow Medical Journal, December, 1880, pp. 499-502.

"Dr. Macewen's name is well known in connection with osteotomy, and any collective work on this subject from his pen is sure of a thoughtful consideration from the profession generally.

The book before us is a critical summary of most that has been done in this country and abroad in the operative treatment of the deformities resulting from rickets, together with a pathological survey of the actiology of the disease. It would be interesting, therefore, from this point of view, but coming as it does from one who has had large personal opportunities for studying the subject and applying the various remedies, we may look for both help and guidance, such as may be safely relied upon. The book is fully illustrated, and its general appearance is beyond praise.

"The book will repay careful perusal, and we recommend it to the notice of all surgeons."—

Medical Times and Gazette, London, 25th December, 1880."

"The work before us is the first which has appeared on the subject, and is written by one whose great personal experience entitles him to speak with some authority."

"It seems to us that the best operation for the correction of genu valgum is that of the author. It is much easier to perform than Reeves'."

"In closing, we cannot but congratulate the author on the very

satisfactory manner in which he has treated the subject, and would cordially recommend the volume to every one who is interested in osteotomy."—New York Medical Journal, April, 1881, pp. 436-9.

"The author is to be congratulated on the success of his work.

. . Those to whom the subject of osteotomy is new, have now a reliable text-book for reference, clearly written and easy to read." Then, speaking of the various operations, the reviewer says:—

"Dr. Macewen's plan, the one now most generally adopted by unprejudiced observers."—Birmingham Medical Review, April, 1881, p 131.

"We confidently recommend it to the study of all interested in the removal of these common, but often disastrous, deformities." The Lancet, 20th November, 1880, p. 817.

REVIEW OF M. DEMONS' FRENCH TRANSLATION OF THIS WORK.

"C'est cette traduction qui vient d'être publiée et qui nous permet de nous rendre plus facilement compte des nombreux et remarquables succès obtenus par le chirurgien de Glasgow. La courte analyse que nous donnons ici ne peut fournir qu'une idée bien imparfaite de la valeur scientifique et surtout de l'utilité pratique de l'ouvrage.

"Ce fut Macewen qui, le premier dans Grand Bretagne, en Avril, 1875, appliqua à l'ostéotomie les principes de Lister, et depuis cette époque il a pratiqué 835 fois cette opération! Aussi donne-t-il les renseignements les plus autorisés sur le manuel opératoire, les indications les plus précises sur le choix des instruments et la manière de les utiliser, enfin sur les précautions à prendre pendant les divers temps de l'opération. On reconnait bien vite l'œuvres d'un praticien expérimenté pour lequel les plus petits détails ont leur importance.

"Il est bien évident que, malgré toute la sécurité que peut donner la méthode antiseptique, il est toujours préférable d'éviter l'overture d'une grande articulation. C'est un des grands avantages de l'opération de Macewen. . . . De cette façon il y eu 835 ostéotomies exécutées sur ces 557 membres. Sur ce nombre d'opérés il n'y a eu que trois morts, et encore ces trois décès étaient-ils imputables à des causes étrangères à l'opérateur. Nous n'insistons pas plus longuement, ces magnifiques résultats peuvent se passer de commentaires.

"M. Demons a fait œuvre éminemment utile en facilitant la vulgarisation d'un ouvrage aussi remarquable qui celui de Macewen."—Journal de Médecine de Bordeaux, 19 Fevrier, 1882, pp. 316-318.

"Ceci est un livre d'actualité. Après avoir publié plusieurs leçons sur l'ostéotomie antiseptique le professeur W. Macewen a réuni en un volume non seulement la matière de son enseignement, mais des considerations générales théoriques et pratiques d'un vif intérêt sur les difformités des membres inférieurs. . . On sent l'œuvre précise d'un homme qui a manié des instruments et a pu comparer leur valeur relative. . . . Quoi qu'il en soit de cette critique, le professeur Macewen a rendu un signalé service à la chirurgie en consacrant un livre bien conçu à la vulgarisation d'un procédé opératoire relativement facile dans son exécution et jusqu'à cette heure présentant peu de danger." —Revue de Chirurgie, Paris, 10th March, 1881, p. 253.

Published Opinions of Surgeons on Macewen's Operation, and on the Results of Osteotomy.

In the preface to the French edition of the work on Osteotomy, M. Demons says:—

"A Glasgow, dans cette Infirmerie Royale, théâtre des premiers essais et des persévérants efforts de Lister, je fus émerveillé en parcourant les salles de M. William Macewen. Avec cette franche amabilité dont les Ecossais ont depuis long temps le secret, on me montra un nombre considérable de malades dont les membres, déformés par le rachitisme, avaient été admirablement redressés par le ciseau du chirurgien. Les uns avaient subi l'opération tout réçemment, d'autres étaient sur le point de quitter leur appareil, d'autres enfin se promenaient gaiement dans

les salles. . . . Alors je compris comment le même chirurgien pouvait observer un si grand nombre de difformités des membres inférieurs, et pratiquer des opérations dont le total a soulevé l'étonnement de quelques auteurs français. Les résultats que je constatai de mes propres yeux me parurent si remarquables, la manière dont ils étaient obtenus si habile et si bien réglée, que je me promis d'insister, en France, sur la valeur exceptionnelle de l'éminent chirurgien de Glasgow. Je ne crus pas pouvoir mieux faire que de demander à M. Macewen l'autorisation de traduire son ouvrage. Je le remercie bien vivement de m'avoir accordé cette faveur et d'avoir revu toutes les épreuves de ce livre."

Traduction et Notes, par Albert Demons, Chirurgien de l'Hôpital Saint-André, et Professeur agrégé à la faculté de Médecine de Bordeaux.

Speaking of Genu Valgum, Beckel says :-

"Le pansement de Lister nous donne sous ce rapport des garanties de sécurité immenses et le procédé imaginé par Macewen rend l'opération presque inoffensive. C'est à elle que je me suis rallié dans ces dernier temps."

"Voici les motifs qui m'ont guidé: Tout d'abord, l'hypertrophie portait sur le condyle interne du tibia et sur la partie correspondante de la diaphyse; j'étais par consequent autorisé à pratiquer l'osté-otomie du tibia de préférence à celle du fémur. J'avoue que, si j'avais eu l'expérience de Macewen à l'epoque où j'ai pratique ces opérations j'y aurais peut-être en recours; car j'ai acquis le conviction depuis lors que ce procédé permet de redresser les genoux valgus les plus prononcés et qu'il n'est, somme toute, pas plus dangereux que l'autre, comme le prouve la remarquable statistique de son inventeur.

"... Aussi avec Beauregard je dirai que le mieux est d'imiter la nature et sous ce rapport le procédé du chirurgien écossais ne laisse rien à désirer. Je n'ai pas à le décrire ici, et je renvoie le lecteur à l'excellente traduction qu'en a donée M. Demons. . . .

"En résumé, le procédé de Macewen constitue pour le genou valgus le procédé de choix. . . ."

J. Bæckel, Chirurgien, des Hôpitaux Civils de Strasbourg, Nouveaux Faits d'Ostéotomie—Revue de Chirurgie, 10th June, 1882. In an Editorial on "The Antiseptic Problem," which appears in the *Annals of Anatomy and Surgery*, New York, February, 1881, the following appears:—

"The most startling and suggestive facts in connection with the subject of Listerism are to be found in the notorious impunity with which its advocates now perform operations formerly considered so dangerous as to be unjustifiable, except in extreme necessity. Most especially the so-called 'operations of expediency' came under this head of unjustifiable operations. Now, however, under the protection of antisepsis, these operations are undertaken without thought of risk Macewen of Glasgow furnishes some figures sufficient to awaken the careful thought of every practical physician. [Here the editor quotes Macewen's statistics, and then follows.] Here is food for reflection! One surgeon performs 557 operations without a single death fairly attributed to the operation; yet, not many years ago, no surgeon would have undertaken one of these operations without running the greatest danger of destroying the patient's life, and irretrievably ruining his own reputation."

VIII.—Opinion of Surgeons on Macewen's Operation for Genu Valgum and Remarks on the Statistics of the Operations.

Extracts from a Clinical Lecture on Deformities of the Skeleton and their treatment by general and surgical means, by C. G. Wheelhouse, F.R.C.S., Consulting Surgeon to the General Infirmary, Leeds. Delivered before the students of the Yorkshire College, Leeds.

While speaking of evils which may arise from Ogston's operation he says—"Neither of these evils has, however, I am even now thankful to tell you, ever happened to me, and often as I have performed it within these walls before I resigned my active surgeoncy I never really saw any serious consequences follow it. Nevertheless it was a day of rejoicing with me when I was able to supersede it by the more efficacious and unquestionably less dangerous method proposed by Dr. Macewen, of simply dividing

the shaft of the femur above the joint and without risk of interfering with it; and I never take up our operation list and read therein, as I do almost every week, of one or more "Macewen's operations for Genu Valgum" to be performed, without thinking how happy both surgeon and patient ought to feel that the one operation has superseded the other.

"Since the day I performed the first Ogston's operation, no fewer than sixty-nine such operations have been performed in this Infirmary; and though Macewen's operation is the newer proceeding, I learn from the records of the institution that it too has been performed two hundred and eleven times, and so successful have both operations been that out of all this great number only two have died-one from pyæmia due to the operation, and one from scarlet fever contracted after the operation and during the process of healing. And of other sections of bones for the cure of deformities I could give you a long list (236 which have been done in the same time). Of the satisfaction they have afforded me I can give you no comprehensible idea; but I can congratulate you, and I do very heartily, that a means of safely effecting untold good and of mitigating indescribable misery has by the experience of the last few years been placed at your disposal."-British Medical Journal, May 22nd, 1886, p. 962.

Mr. Willet, Surgeon to Saint Bartholomew's Hospital, London, in the Saint Bartholomew's Hospital Reports, vol. xx. 1884.

"Results of a hundred Osteotomies with Remarks."

"Out of 82 Osteotomies upon 49 patients, 79 upon 47 patients were performed by Macewen's method"—p. 64. "All the remaining operations have been in accordance with that devised by and now universally called after Dr. Macewen of Glasgow. Having performed almost eighty operations after this method, without any accident or incident, I have naturally nothing but the highest praise to bestow upon it, as in my hands a safe, simple, and certain operation in all ordinary cases of Genu Valgum or Genu Varum.— Again I may affirm that no patient has been made even temporarily ill by the operation and not one has caused me a day's uneasiness."

Cases of Osteotomy, by Hepenstal Ormsby, F.R.C.S.I., M.D., Lecturer on Clinical and Operative Surgery, and Surgeon to the Meath Hospital and County Dublin Infirmary; Surgeon to the Children's Hospital, Dublin. ("Dublin Journal of Medical Science," April, 1885.)

"The operation I always perform to correct genu valgum is Macewen's, as I believe it to be the best, the simplest, and the one most likely to be followed by success in rectifying the deformity. It is also not likely to be succeeded by any articular disease or impairment in the knee joint. I believe that I have performed the operation of osteotomy more frequently than any other surgeon in Ireland, and I am happy to say that up to the present I have not had a single bad result."

Medical and Surgical Aspects of In-knee (Genu Valgum), its relation to Rickets, its prevention and its treatment with and without surgical operation. By W. J. Little, M.D., Surgeon, F.R.C.P. London: Longmans, Green & Co., Paternoster Row. 1882.

Page 152.—"It is unnecessary to review here the several methods of severing the thigh bone for severe in-knee, or the leg bones when curvature of these complicates the knee distortion, or has become the main deformity, which has been carried out by Annandale, Ogston, Reeves, Barwell, and others, for in our opinion, the method pursued by Macewen is destined to supplant them all by its simplicity, celerity of performance, safety, and, moreover, by the perfection of its results. We have not only perused all that this surgeon has written on the subject, but have had the opportunity afforded by him of witnessing his performance of a double operation, at a private seance at Glasgow, and of thoroughly examining several adolescent patients and an adult, who had been operated on some months, and in one case two years previously. Even in the adult, who had been one of the most seriously affected, practised eyes and hands failed to discover more than the faintest sign that in-knee had ever existed."

Page 154.—"We have here described the principal points in Macewen's proceeding. Simple as they are, we strongly advise every surgeon about to operate by this method for the first time, to study all the minor points insisted upon by him; for here, as

elsewhere the great Wellington said, victory, when traceable to the leader, has depended upon attention to the smallest details."

Page 161.—"It is right to say that the many surgeons who, notwithstanding that their particular methods of procedure have not prevailed, have had a share in advancing step by step from the bold, yet coarse, sawing method and large cutaneous incisions resorted to by Rhea Barton and Mayor to the almost subcutaneous method employed by Adams, the more cutaneous method of the chisel introduced for knee anchyloses by Mr. Little, and the numerous cases of in-knee relieved by that method by Dr. Macewen, have conferred a great blessing on humanity."

Request for permission for Italian Translation of Work on Osteotomy.

> Ospedale Maggiore di S. Giovanni Battista E della Citta di Torino.

MOST HONOURED SIR,

Having been assistant to Dr. Margary for the last three years at St. John's Hospital at Turin, I have had the pleasure of witnessing the splendid results of osteotomy in its most varied applications.

I have myself performed, thanks to the liberal compliance of my kind principal, many osteotomies with great success. will therefore find it natural that I should feel enthusiasm for this beneficent means of surgical therapeutics; and as your name is bound with that of osteotomy, as the name of the author is united with that of his work, you will readily imagine the feel ing of profound esteem and admiration which I entertain for yourself and which I desire to avow openly and frankly.

Unfortunately osteotomy has not hitherto found in Italy its well deserved welcome, thanks to the fossil nature of official public teaching, and also to the deplorable results of operations undertaken without that strict and I would say that due and even pedantic observance of those precepts which will carry to poster-

ity your valuable and standard work.

It is my firm conviction that surgery in Italy would be greatly advanced by the translation of your book, therefore I ask your permission and authority to allow such translation.

It shall be my care that the translation shall not prove unworthy of the author of the treatise.

With much esteem I have the honour to remain, Your most obedient servant,

CARLO LAMPUGNANI.

Turin, March 20, 1885.

Über die supracondylare Osteotomie des Femur zur Heilung des Genu Valgum. Von Dr. E. Kleinmann, Assistenz-Arzt im 4. Wurtt. Inf.-Reg. Nr. 122, z. Z. Assistenz-Arzt der Klinik.

Bruns Mittheilungen aus der chirurgischen Klinik zu Tubingen. Translation:—

"It is therefore from anatomical and pathological considerations that Ogston's operation has been abandoned, and it is on anatomical, pathological, and clinical reasons that we prefer Macewen's operation to all others." He then describes eighteen osteotomies performed by himself in the klinik of Tubingen, all with one exception by Macewen's operation. In one case he performed on one side Macewen's operation and on the other Ogston's, and he found that while Macewen's operation resulted in a perfectly straight limb with free movement of the knee joint, that Ogston's operation resulted in a stiff and partial ankylosis of the knee. He concludes his paper thus:—

"The results of Macewen's operation as laid down in these pages should suffice to give it the widest recommendation. It is indeed an operation resting upon a rational basis, of utmost simplicity, applicable to every constitution, and if antiseptics be strictly applied it is an operation without the slightest danger, which together with the simplest treatment of wounds leads to the quickest and most certain results."

Osteotomy in Belgium.

Quelques Ostéotomies pratiquées a l'Hôpital des Anglais, relation par le Dr. J. Deschamps, Chirurgien adjoint, Ancien assistant à l'Université de Liége, Lauréat du Concours Universitaire 1874-5, Président de la Société Médico-Chirurgicale de Liége.

"'J'étais heureux,' dit Macewen, dans l'édition française de

son travail sur l'Ostéotomie, 'de m'adresser aux chirurgiens français au sujet de l'ostéotomie, dans la pensée qu'avec leur dextérité et leurs brillantes qualités opératoires, une fois qu'ils auraient accepté l'ostéotomie, non seulement ils lui accorderaient une place durable dans leur pratique, mais encore ils étendraient son usage en l'appliquant à d'autres régions.'

"La traduction de l'ouvrage de Macewen par A. Demons date

de 1882, et déjà l'ostéotomie a fait son chemin en France.

"La Belgique, elle aussi, a entendu l'appel de l'illustre chirurgien de Glasgow, et si jusqu' à présent l'ostéotomie ne s'est pas implantée dans notre pays, comme opération classique, tout nous porte à croire qu'elle ne tardera pas à le faire.

"C'est donc aux chirurgiens belges que je m'adresse, désireux de leur faire connaître d'une façon claire et précise le mode opératoire, tiré des renseignements magistraux de Macewen, de ceux de nos chefs de service MM. Lebeau et Hicguet et de notre modeste pratique. Heureux si nous pouvons être utile."

In a paper on "Osteotomy for Genu Valgum," by C. T. Poore, M.D., Surgeon to St. Mary's Hospital for Children, New York, published in the New York *Medical Record*, 15th August, 1881, the following occurs:—

"While, therefore, the theory on which Mr. Reeves based his operation would seem in some cases to be correct, and the more perfect, yet it is outweighed, I think, by the difficulty mentioned above. I have, therefore, in my last twelve cases, abandoned it, and adopted that of Macewen of Glasgow, which he describes as follows:—" [Then follow details and woodcuts of the result of the operations performed by him.]

Dr. Poore discusses this operation in previous papers in the same Journal for 27th May, 1880.

"Notes on Osteotomy," by Edward H. Bennett, Professor of Surgery in the School of Physic, and Surgeon to Sir Patrick Dunn's Hospital, Dublin, in which the supra-condyloid method of operating is mentioned. "One is a typical case of Macewen's operation for rickety deformity of the legs. . . ." The case is given in detail, and was successful. "On 1st December, 1880, finding no improvement from milder treatment, I divided the

greater part of the thickness of the right leg with Macewen's osteotome."—Medical Press and Circular, 27th April, 1881, p. 352.

In a discussion on Osteotomy, before the Surgical Society of Ireland, 18th March, 1881, Mr. Stokes, Dublin, referring to the use of "Macewen's osteotome," said that:—

"He had an opportunity of seeing the third of the cases Mr. Bennet had recorded, and he could bear testimony to the admirable result that had been obtained. It spoke volumes for the great practicability of the instrument already mentioned."—

Medical Press and Circular, 27th April, 1881, p. 359.

In a paper entitled "Macewen's Operation for Genu Valgum," by Fred. Alcock Nixon, F.R.C.S.I., Surgeon to Mercer's Hospital, and Lecturer on Anatomy in the Ledwich School of Medicine, Dublin, the following occurs:—

"Of the operations proposed by Barwell, Reeves, Ogston, Chiene, &c., Macewen's appears to me by far the safest and best. It is well above the important structures which secure the articulation, and it leaves the epiphysis intact, and so obviates the danger of arrest of development of the bone: still the results obtainable are highly satisfactory."—Medical Press and Circular, 11th May, 1881, p. 401.

In a discussion in the Surgical Society of Ireland, 1st April, on "Macewens Operation for Genu Valgum," Mr. Kendal Franks mentions that he had performed the operation twice and gave details. Mr. Bennet stated:—"Speaking generally, the great principle of Macewen's operation was first of all that it was a section made with an osteotome or chisel without any débris from the saw, and while made through an open wound, still a limited one, and not such as would be made for an excision of the knee. On this point he might fairly criticise Mr. Nixon's communication and dispute the priority he claimed in the performance of Macewen's operation, for it would be recollected that he had himself brought forward on the last night of meeting a paper in which he treated of three cases, including four operations by Macewen's method in distinct localities; two on the tibia for deformity of the tibia, the type of Macewen's operation."

In a discussion on "Osteotomy for Genu Valgum," in the New York Surgical Society, 10th May, 1881, Dr. Weir presented a boy on whom he had performed Macewen's operation for genu valgum with a satisfactory result, and discussed the various operations at present in vogue, giving the preference to the one just mentioned.

Mr. Hutchison exhibited a set of chisels and a mallet devised by Macewen for performing his operation.

The discussion was participated in by Dr. Poore, Dr. Briddon,
Dr. Post, and the President, Dr. Sands.

New York Medical Record, 13th August, 1881.

"Three Operations for Genu Valgum, by Macewen's method."
—J. C. Hutchison, M.D., Brooklyn, N.Y. In the *Proceedings of the Medical Society of the County of Kings*, July, 1881, p. 99.

Osservazioni e Note di Chirurgia—Genu Valgum—Osteotomia di Macewen—Risultato Completo. Dal Dottore F. Margary, Chirurgio Primario dell' Ospedale di S. Giovanni di Torino. Operazione ii e iii.—operazione praticata il 6th November, 1879.

See also cases of Macewen's operation in-

"Lo Sperimentale."—Giornale Italiano di Scienze Mediche, tom xlv., p. 541.

Six cases of Macewen's operation are given by P. Bruns, of Tubingen.—Centralblatt für Chirurgie, 21st August, 1880.

Lister has performed a number of Macewen's operations for genu valgum.—See Antiseptic Surgery, by Cheyne.

"Ceccherelli relate sept cas d'ostéotomie du femur (procédé de Macewen) exécuté en Italie avec succès."—Revue des Sciences Médicales, 15th April, 1881, p. 742.

Processo Macewen—Ginocchio Valgo destro—Dal P. Panzeri. Milan, 1881.

Annotazioni di Chirurgia Ortomorfica pei Dottori G. Albertini e Panzeri Dell' Ospedale Maggiore di Milano, 1881. (Osteotomia di Macewen.) James F. West, F.R.C.S., Senior Surgeon to the Queen's Hospital, Birmingham, writes in St. Thomas Hospital Reports, vol. x., p. 7, 1880:—

"The brilliant results obtained by Dr. Macewen, of Glasgow, by antiseptic treatment are especially worthy of notice." Then follows quotation.

W. Watson Cheyne, F.R.C.S., Demonstrator on Surgical Pathology at King's College, London, in his work on *Antiseptic Surgery*, says, after quoting Lister statistics:—

"I shall now consider the results obtained by other surgeons, and I shall take first, as being the most remarkable result as yet published, the statement made by Dr. Macewen in the *Lancet* for 18th September, 1880. He there gives the result of all the cases in which he has made compound fractures aseptically"; p. 504.

At page 488 he gives several satisfactory results of Macewen's operation for genu valgum performed by Lister.

T. Holmes, M.A. (Cantab.), Vice-President, Section Diseases of Children, International Medical Congress, London, 1881, in summing up discussions on genu valgum, said:—"He felt bound, however, to acknowledge the efficiency of the method, and that Dr. Macewen had made a distinct advance in surgery."—The Lancet, 20th August, 1881, p. 331.

Professor Volkmann, of Halle, in his address on the "Changes which Surgery has undergone during the last Ten Years," delivered at the International Medical Congress, London, says:—

"Bone and marrow will submit to every kind of treatment without putrefying and without suppuration. Orthopædics celebrated their greatest triumphs in the saving and straightening of limbs. We read that Mr. Macewen alone has performed 833 osteotomies, of which 827 were healed without suppuration; and he lost no patient from the operation itself or its consequences."

—The Lancet, 13th August, 1881, pp. 281-283.

IX. RADICAL CURE OF OBLIQUE INGUINAL HERNIA BY INTERNAL ABDOMINAL PERITONEAL PAD AND RESTORATION OF THE VALVED FORM OF THE INGUINAL CANAL.

Published in the Annals of Surgery, 1886, also in the British Medical Journal, 1887.

German translation, by Dr. Carl Lauenstein, Hamburg.

This operation now finds a place in the English text books; it is practised in Scotland, England, Germany, France, and America.

X. On the Pathology of Transverse Fracture of the Patella, showing the Chief Cause of Non-osseous Union.

The Lancet, 17th November, 1883. Annals of Surgery, March, 1887. Translated into German. Noticed in a Leader in the Lancet.

On Fracture of the Patella. By George Fowler, of Brooklyn.

"In an able article upon this subject by Macewen, of Glasgow, especial attention is directed to the entanglement of the soft parts between the fragments, and the very great probability of this complication being the principal cause of failure of union after transverse fracture of this bone. In the present case a very good illustration of this state of affairs was found to exist upon closely examining the parts."—Annals of Surgery, September, 1885.

XI. ON THE TREATMENT OF ANEURISM BY THE INDUCTION OF WHITE THROMBUS IN THE INTERIOR OF THE SAC.

Being the Inaugural Address delivered at Birmingham to the Midland Medical Association. Appeared in the *British Medical Journal* and the *Lancet*, November, 1890.

XII. THE OSTEOGENIC FACTORS IN THE DEVELOPMENT AND REPAIR OF BONE.

Annals of Surgery, 1887. Quoted in American, French, and German papers.

Comments of the Press.

"A very able article on the subject of the 'Osteogenic Factors in the development and repair of Bone' appears in the Annals of Surgery for October from the pen of William Macewen, Surgeon, Royal Infirmary, Glasgow." Here follow two pages of extracts, which end with the following:—"These results present some unexpected facts, if we are to judge of the prevalent views

regarding diseases of bone before the days of antisepticism. Truly the surgery of to-day has advanced even in the country of the immortal Syme."—Medical Science, Toronto, November 1, 1887.

In a leading article in the *Medical News*, Philadelphia, October 22, 1887, on the "Osteogenic Factors in the development and repair of Bone," there appeared the following:—"Under the above caption Dr. William Macewen, of Glasgow, presents an interesting and important contribution in the October number of the *Annals of Surgery*. There are but few persons who are entitled to speak with so great authority in regard to surgical affections of the bones, and any communication from him in regard to their pathology and surgery is sure to attract attention. In the present article the observations are physiological and in a measure experimental, and have a most important practical significance." Then follows two columns of résumé and observations thereon.

In a second leading article in the same paper, on the appearance of the second part of the paper in the *Annals of Surgery*, there appears the following:—"This paper is completed in the *Annals of Surgery*, and the discussion of the subject is continued in an additional series of propositions, which to a considerable degree tend to overturn the accepted views in regard to the *rôle* that the periosteum plays in the production of bone."—*Medical News*, November 19, 1887.

XIII. Two Papers on "The Introduction of Tracheal Catheters by the Mouth in Lieu of the Operation of Tracheotomy or Laryngotomy."

Published in the British Medical Journal, 24th and 31st July, 1880.

This memoir was translated into French at the instance of the Editors of the *Paris Medical*, and appeared in that paper on 4th November, 1881.

The Committee on Anæsthetics, appointed by the British Medical Association, recommend the use of this method in certain cases.

The following articles were also published on the same subject:

"Tracheal Tubes introduced through the mouth for administration of Chloroform during an operation for removal of Epithelioma from the Pharynx and Tongue."—The Lancet, 20th November, 1880.

"Introduction of Catheters into Trachea through the Mouth in *Edema Glottidis*."—British Medical Journal, 28th December, 1880.

Quoted in the London Medical Record, 15th April, 1879.

Since the above was published, there have been several cases reported where such tubes were successfully used by other surgeons.

Also see Transactions of the International Medical Congress, vol. iv, p. 212, for Papers on "The Surgical Treatment of Croup and Diphtheria, by the introduction of tubes through the mouth into the trachea," and remarks thereon, by Dr. Robertson.

XIV. THE DIAGNOSIS OF ALCOHOLIC COMA,

Read November, 1878, at the Opening of the Royal Infirmary School of Medicine.

Published in the Glasgow Medical Journal, January, 1879.

Noticed in the Lancet, 16th November, 1878.

And also in the British Medical Journal, 1878.

Translated into German—Deustche Medicinische Wochenschrift, September, 1879, p. 470.

Appeared in abstract in Braithwait's Retrospect, vol. i. 1879.

"There will be no difference of opinion as to the interest of Dr. Macewen's contributions to the solution of a difficult question in diagnosis."—The Lancet Annotations, 16th November, 1878.

XV. DEMONSTRATION ON THE ELICITATION OF A DIFFERENTIAL CRANIAL PERCUSSION NOTE AS AN AID TO CEREBRAL DIAGNOSIS.

XVI. LIST (INCOMPLETE) OF MISCELLANEOUS PUBLISHED LECTURES, PAPERS, AND NOTES ON CASES.

"Penetrating Wounds of the Thorax and Abdomen treated Antiseptically."—Glasgow Medical Journal, January, 1875.

Noticed in the London Medical Record, 2nd June, 1875.

"Clinical and Pathological Observations on some Cases of Fracture of the Skull and Intra-Cranial Lesions."—Edinburgh Medical Journal, August, 1875.

"Wounds in relation to the Instruments which produce them."
—Glasgow Medical Journal, January, 1876.

Noticed in the London Medical Record, March, 1876.

"Clinical Observations on Synovial Bursæ, with special reference to those situated in the Popliteal Space."—Glasgow Medical Journal, October, 1877.

"The Antiseptic Treatment of Abscess, with illustrative Cases."

—Glasgow Medical Journal, May, 1878.

"Lecture on Osteotomy for Genu Valgum, Varum, and Ricketic Curves."—The Lancet, 28th December, 1878, and 26th April, 1879.

Quoted in the London Medical Record, February, 1879.

Abstract in Braithwait's Retrospect, 1879.

"Clinical Lecture on Antiseptic Osteotomy."—British Medical Journal, 3rd May, 1879.

"Clinical Lecture on some points in Antiseptic Osteotomy."— Glasgow Medical Journal, May, 1879.

- "Antiseptic Osteotomy for Genu Valgum."—Read before the British Medical Association at Cork, 1879.—British Medical Journal, 18th October, 1879.
- "Clinical Lecture on the Results of Osteotomy in the Royal Infirmary."—The Lancet, 18th September, 1880.
- "Clinical Lecture on some points connected with the Treatment of Wounds."—British Medical Journal, 29th January, 1881, and 5th February, 1881.

In these reference is made to Chromic Gut Ligatures and Chicken Bone Drainage Tubes.

"An interesting Pathological Observation on the Life of Bone."—The Lancet, 22nd June, 1878.

Noticed in a Leader in The Lancet, 28th May, 1881.

- "Scrotal Inclusion—with summary of former cases and details of a new one."—Glasgow Medical Journal, October, 1878.
- "Transfusion of Human Blood performed antiseptically, with report of a successful case."—The Lancet, 5th July, 1879.
- "Tumour of the Dura Mater removed during life in a person affected with epilepsy."—Glasgow Medical Journal, Sept., 1879. Mentioned in a Leader in the British Medical Journal, 19th November, 1881.
- "Radical Cure of Hernia and Suture of Inguinal Canal with Chromic Gut."—Glasgow Medical Journal, January, 1880.

Noticed in Revue des Sciences Médicales, 15th April, 1881, p. 671.

- "Instructions on the introduction of the Stomach Pump and Nasal Tubes."—Glasgow Medical Journal, February, 1873.
- "Two cases of Injury to the Abdomen having period of latency and afterwards proving rapidly fatal"—Glasgow Medical Journal, November, 1872.

Noticed in the London Medical Record, February, 1873.

Noticed in the Medical Press and Circular, 21st May, 1873.

- "Ligature of Femoral Artery in Scarpa's Triangle for Popliteal Aneurism."—Glasgow Medical Journal, February, 1873.
- "Ligature of the common Carotid Artery with Chromic Gut."

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