patient, happened to visit the hospital while McC. was under treatment, and, taking an interest in her fellow-sufferer, has very kindly established her in business as a dressmaker, where she now follows her occupation in comfort, being entirely relieved of her pain. Her only trouble now arises from some menstrual irregularity, which, I quite hope, will prove to be merely temporary.

Why the pain in this case was on the left side, when the principal mischief was on the right, I cannot explain. The satisfactory point is, that removal of the disease has put an end to the pain.

The second case is that of a married woman, aged 26, named Mary M., a winder in a cotton-mill, who was admitted into St. Mary's Hospital, Manchester, on September 25th, 1885, complaining of continuous pain in the lower part of the abdomen, especially on the right side, and down the right thigh. The pain had existed for seven years, commencing soon after the birth of her only child. At first, it only came on immediately before each menstrual period, but it was even then so severe while it lasted, that she was rendered unfit for work. During the last two months, the pain had been severe and continuous, and there had been persistent hæmorrhage from the uterus.

The patient, on admission, was thin and anæmic, with a haggard and pinched countenance, betokening much suffering. On bimanual examination of the pelvis, the right side was found to be occupied by an oblong firm swelling, very tender to the touch, pushing over the uterus to the left of the middle line. The diagnosis was uncertain; but I thought it most probable that there was distension of the right Fallopian tube. The hot douche and absolute rest were found, at the end of a fortnight, not to have resulted in the least relief; and, accordingly, the risk having been explained to the patient, an exploratory incision was made in the middle line of the abdomen on October 7th. The right ovary was found to be enlarged to the size of a hen's egg, and to be cystic; the contents of the cyst, which escaped during removal, consisted of dark fluid blood, altered by long retention. Closely connected with the diseased ovary was a thick fusiform swelling, consisting of the Fallopian tube distended with blood, partly fluid and partly clotted, the walls of the tube being much thickened by chronic inflammation and firmly adherent externally to a coil of small intestine. After carefully separating the adhesions, the tube and ovary were both removed, the ligature being placed close to the uterus. The left ovary was also found to be enlarged from incipient cystic disease, and was accordingly removed. The tube on the left side was healthy. A glass drainage-tube was inserted at the lower angle of the wound, and allowed to remain until the fourth day. The patient made an excellent recovery, the temperature only once rising to 100° Fahr. She had some pain about a fortnight after the operation, but it soon passed off, and she is now entirely free from pelvic discomfort, and able to go about as usual.

These cases require little comment. I have not brought the patients, for there is nothing now to show but a healthy cicatrix.

One word, however, may be added as to the conditions which, in my opinion, justify operative interference. In considering the treatment of disease of the so-called uterine appendages, it is always necessary to bear in mind that even severe and continuous pain may be after all purely neuralgic, or, at any rate, merely functional. In such cases, probably no one would consider an operation justifiable. Having found it necessary, as everyone engaged in the practice of gynecological surgery must have done, to formulate for my own guidance the conditions which justify exploration, and bearing in mind the special liability of the female pelvic organs to the functional disorders to which I have alluded, I have come to the conclusion that the essential conditions are two in number; namely, (1) the presence of physical signs of actual disease, in the form of one or more circumscribed intrapelvic swellings not springing directly from the uterus; and (2) the existence of continuous pain, which rest and other simple methods of treatment fail to relieve, and which is sufficiently severe in character to disable the patient from following the ordinary occupation of her life, whether that occupation be the means of earning a livelihood, or merely the work of her own household. Where these two conditions are present, and the patient and her friends are made acquainted with and are willing to accept the risk, I believe we not only may operate, but that it is our duty to do so.

EPIDEMIC OF GOITRE.—Dr. Hand, in the *North-Western Lancet*, reports an epidemic of goitre among the inmates of the Minnesota State Reform School. Forty-four out of 140 were suffering at the time of Dr. Hand's observation. It was thought that the origin of the trouble lay in the flour from which the bread was made. The usual treatment, with a change in the flour, was speedily followed by a cure of most of the cases.

A NEW, EASY, RAPID, AND PAINLESS METHOD OF REDUCTION OF DISLOCATIONS OF THE SHOULDER, WITHOUT AN ANÆSTHETIC: WITH CASES.

By NEIL MACLEOD, M.D. Edin., Shanghai.

AN experience in my own person, three years ago, of a dislocated shoulder, and its reduction without an anæsthetic, by the ordinary method, with the heel in the axilla, suggested the method found successful in the two cases here recorded. It has been my misfortune, in three years, to have only these two opportunities of testing the efficiency of the method proposed; but the result so far exceeded my expectations, that I am tempted, without waiting for other cases, to ask surgeons who have more frequent opportunities than I have to make a trial of it, especially as it is a painless one, and, if unsuccessful, does not in any way interfere with the adoption of other methods.

In my own case the dislocation was subglenoid, with very marked abduction of the elbow. When the arm was allowed to hang unsupported, there was pain at the insertion of the deltoid muscle, at once relieved by abduction of the elbow. A surgeon, who was at hand when the accident happened, placed the arm over his shoulder, and tried to press the head of the bone into its proper place with his two thumbs, causing great pain at the point of pressure, and failing to make reduction. I then lay down on the ground, and the reduction was accomplished in the ordinary way, with the heel in the axilla, requiring great force, accompanied by a jerk; the pain at the lower part of the deltoid being very great. For several days after reduction, this pain continued, preventing sleep; and at the end of the week there were tenderness, discoloration, and two lumps with a hollow between at the insertion of the deltoid. There was no discoloration visible at any time in the region of the shoulder itself. I inferred, and I believe rightly, that the deltoid had been partly torn at its insertion. From the behaviour of the pain before reduction, when strain was put on and taken off the muscle, and also its intensity during, and persistence after, reduction, it seems unlikely that the tear was caused by the accident, and that it was more probably due to the procedure in reduction. It is not easy to rupture tendon or muscle by steady traction; but let either be put at the disadvantage present in subglenoid dislocation (as the deltoid muscle is), and the long arm of the lever from the insertion of the deltoid to the hand would easily account for such an accident, when the force was applied by a powerful man. At all events, the pain accompanying reduction in my case, made relaxation of the muscles concerned in the movement of the joint absolutely impossible. Now, after a lapse of three years, I have pain at this point with certain movements, there being none whatever in the region of the joint.

In accordance with the axiom, that the direction of the reducing should be as nearly as possible opposite to that of the producing force, I determined, in the first case that came into my hands, to pull the arm in a direction at right angles to the line of the trunk. This is nothing new, for it is recommended by Hulke and Lowe, and perhaps by others; but Hulke further recommends the sitting posture on a chair, a doorpost, two or three assistants, and a close hitch, and Lowe, the sitting posture on the floor and a sofa. In a sitting posture, while a man may relax his shoulder-muscles (and he will not do so if there be pain there), the other muscles of the body are more or less tense, and so enable him, by association, to resist with the shoulder-muscles, involuntarily as well as voluntarily. The only position in which any and every one is accustomed to relax completely all voluntary muscles, is when lying down. This fact is taken advantage of, certainly, in the ordinary heel-in-the-axilla method; but the direction of traction in this method causes pain, and, so long as pain exists, it is impossible to have relaxation of muscles in any position. It is noteworthy that, to relieve the pain of a dislocated shoulder, the patient supports, that is, abducts the elbow, and the surgeon can raise the elbow to the height of the shoulder, giving comparative ease, while every attempt at adduction produces pain and spasm. Traction in a line at right angles to the trunk in the two cases here described, I found, to my astonishment, did not cause pain when the patient was lying down; and this traction fulfils the axiom as to the direction of the best reducing force.

The deltoid, latissimus dorsi, teres, and pectoral muscles are, as I have pointed out, relaxed when the subject is lying on the ground, and so even with the arm outstretched and also lying on the ground. In the same posture, when the head of the bone has been pushed nearer the middle line of the trunk, as in most dislocations of the shoulder, the insertions and origins of all these muscles have been

approximated, and the muscles are probably still more relaxed than they were without dislocation. On the other hand, when the arm lies by the side in the supine position before dislocation, the origin and insertion of the deltoid are further apart, whilst those of the other muscles are nearer, than when the arm was outstretched; after dislocation in this position, with the arm by the side, whilst the origins and insertions of the other muscles are at least not further apart, those of the deltoid are probably so, and the limb cannot be adducted completely without tension of the deltoid, and great pain. Even if there be no elongation of the distance through which the deltoid has to act, and therefore absence of the element of stretching, contraction will be set up in the deltoid by pain, wherever it may be, provided the pain is the result of adduction, since the deltoid is the great abductor of the arm. During reduction then, by traction favouring adduction, there is spasm of the deltoid; and if the other muscles act at all, the line of traction will not in any way overcome their action, which is at right angles, and tends to keep the head of the bone from slipping outwards. Traction outwards from the trunk at right angles does certainly not stretch the deltoid; and the other muscles are not strained to the extent of their relaxed length in health, until the head of the bone is in position, whilst, if they do resist, they are better overcome than when the limb is adducted.

I have left out of consideration the coraco-brachialis, biceps, long head of the triceps, supraspinatus and infraspinatus, and subscapularis muscles, as they do not probably influence reduction to any great extent, and, at all events, cannot be said to favour it by traction with adduction rather than with abduction.

These theoretical considerations were verified practically during reduction in the two following cases by the absence of pain, as stated by the patients themselves, and by the absence of resistance, observed in the second case; absent, also, probably in the first, but not watched for, my attention being solely occupied in this instance in looking out for the jerk.

CASE I. A heavy, powerful, athletic man, aged 42, fell while hunting; three-quarters of an hour after the fall, I found a subcoracoid dislocation of the left humerus. He complained of great pain when the arm was not supported. I laid him down on the floor, with his arms extended. With my left heel in the axilla, I pulled the arm steadily straight out from the trunk, warning him that this would be painful; and there being no jerk, or other intimation of reduction, I pulled and pulled more strongly, and, thinking I had failed, determined to try the ordinary plan of extension more in the line of the trunk. Before resorting to this, I placed my hand on the shoulder, and, adducting the limb, I was surprised to find the head of the bone replaced.

On inquiry of the patient if the pain was great whilst I was pulling, he surprised me by saying "there was none." At the time, I could not tell at what moment reduction took place, neither could the patient, nor a surgeon who was looking on, and was interested in the experiment, which I had explained to him before setting to work. The pain after reduction was "not worth taking notice of," and was only occasional.

CASE II was that of a small muscular man, aged 28. A fall from a pony resulted in a dislocation of the humerus. Before I saw him, three men had each "had a pull" at the arm, a fourth fixing the trunk by encircling it with his arms; this gave great pain. A fifth bystander volunteered to try the heel-in-the-axilla method, but also failed. They decided that it must be something other than a dislocation. Three-quarters of an hour after the accident, I saw him in my consulting-room. There was a good deal of abduction of the elbow; the shoulder was slightly swollen; pain was complained of in the region of the lower third of the deltoid, and the dislocation was more subglenoid than subcoracoid, not typically either. Raising the elbow to the level of the shoulder afforded great relief; depressing it made him complain lustily. I laid him on the floor, with his arms extended at right angles to the trunk, and, having told him to lie still, asked him how the shoulder felt. "Very easy," was the answer. With my heel in the axilla, I made gentle traction on the arm straight out from the trunk, watching for a jerk, and using a force of from five pounds to ten pounds, so far as I could estimate; there was no jerk. Not expecting reduction, I placed my hand on the shoulder, and was so surprised to find it had taken place, that I had to adduct the arm completely before I was quite convinced. The patient refused to believe that it was done. Here, again, there was no pain during reduction, nor the slightest attempt at, or appearance of, resistance.

In this case, immediately after the accident, while presumably the constitutional effects were still present, great force had been applied unsuccessfully in the same direction in which I applied a small amount successfully three-quarters of an hour later; the former failed

with the man standing, the latter succeeded with him lying on his back. Likewise, lying down immediately after the accident, great force was applied, with the heel in the axilla, in vain, and a small amount of force in the same position, with the heel in the axilla, succeeded later; the former failed with traction in the line of the trunk, whilst the latter succeeded with the traction at right angles to that line. Whilst the first case may possibly have been one of those easily reduced by any method, the previous attempts at reduction make this unlikely in the second case.

Mr. Bryant, in his excellent surgical text-book (third edition, vol. ii, p. 340), writing of the treatment of dislocated humerus, says "the use of anæsthetics has completely revolutionised the treatment of dislocations, and, at the present day, nothing can usually be simpler than the reduction of a dislocation of the shoulder, and what was formerly called reduction by stratagem is now the rule. 'If you can get a person off his guard,' wrote Abernethy, 'you have first to..... and it will sometimes succeed in putting it in'; and the modern surgeon, in describing the reduction of dislocations by manipulation, might use the same language. To reduce a dislocated humerus by manipulation, chloroform is essential."

Now chloroform gets rid of one difficulty in the way of reduction, namely, muscular spasm, and this not sufficiently until pain also is absent. In the two cases described, muscular spasm and pain were both got rid of without an anæsthetic, simply by the use of two precautions, which have certainly been used by other surgeons before, but not, strangely enough, so far as I am aware, both at the same time; and I would fain hope that other cases similarly treated will be as successful.

The whole procedure is of the simplest. Let the patient lie down on his back on the floor or ground, with the dislocated arm outstretched at right angles to the trunk, and also on the floor. Having told the patient to lie quite still and make no effort, let the surgeon, placing the approximate heel in the axilla, make traction gently and steadily at right angles to the line of the trunk; and, as there may be no jerk or evident intimation of the return of the head of the bone to its place, let him ascertain its position, if necessary, adducting the limb to make sure; if reduction have not taken place, let him renew and increase the force of traction, and repeat the examination until he has succeeded or failed, in which latter case nothing has been done to interfere with the application of other methods.

It is possible that, in many cases, the heel in the axilla may be unnecessary; but it will serve to steady the scapula, and affords a better counter-extending force than the weight of the patient's body, and thus leaves him free to lie still and make no effort as if to aid.

I hope that surgeons who may try the method above described will be kind enough to intimate their results, successful or unsuccessful.¹

¹ In the *Edinburgh Medical Journal* for either February or March, 1883, I described my own case, and there proposed the method of reduction tested in the two cases recorded.

THE REDWOOD TESTIMONIAL FUND.—An influential committee has been formed for the purpose of raising a permanent record of Dr. Redwood's services to chemistry in its relation to medicine and pharmacy. It is proposed to found a "Redwood Scholarship" in connection with the Pharmaceutical Society, which has for more than half a century been the principal scene of Dr. Redwood's labours. The occasion of the movement is the retirement of Dr. Redwood from the Professorship of Chemistry to the Pharmaceutical Society, which he has held since 1842. Dr. Redwood is well known as the author of many works on materia medica, as editor of three editions of the *British Pharmacopœia*, as Secretary and Treasurer to the Chemical Society (from 1852-70), and as Secretary to the Cavendish Society. The Executive Committee, of which the President of the Pharmaceutical Society is chairman, includes the names of the President of the Royal College of Physicians (Sir W. Jenner, Bart.), the President of the General Medical Council (Sir Henry Acland, K.C.B.), the President of the Chemical Society (Dr. Hugo Müller, F.R.S.), the President of the Institute of Chemistry (Professor Odling); Sir William Gull, Bart., Sir George Burrows, Bart., Sir Spencer Wells, Bart., Sir Henry Pitman, Sir Henry Roscoe, M.P., Sir Frederick Abel, C.B., Sir J. B. Lawes, Dr. Quain, Dr. De la Rue, Dr. Garrad, Dr. Owen Rees, Professors Frankland, Hofmann, Gilbert, Latham, besides the President of the British Pharmaceutical Conference (Mr. Greenish), and many prominent pharmacists. The preliminary list of subscriptions shows that the movement has already received considerable support. Subscriptions should be sent to the Honorary Secretary, Professor Dunstan, 17, Bloomsbury Square, London, W.C.