expensive bismuth carbonate. The liberation of CO_2 may be facilitated in certain cases by immediately following the dose of carbonate with citric acid gr. xxx. dissolved in 1 oz. of chloroform water. In cases where the hydrochloric acid in the gastric juice is diminished, hydrochloric acid may be given by mouth with advantage, especially in rosacea. Powdered kaolin has been used with the idea of covering over abrasions of the mucous membrane. I am sceptical of its value, and I am also sceptical of the value of the various bitters very commonly prescribed.

The application of local heat to the epigastrium is a treatment of dyspepsia hallowed by long use. Observations by Dr. Payne and myself have given an indication as to how such counter-irritants are effective. Rubbing the skin over the sternum, with or without a counter-irritant, caused a profound effect on the movements of the œsophagus. In one case a sensation of "tingling," experienced some time after the rubbing had taken place, was associated with very considerable peristaltic activity of the œsophagus.

Local heat may be applied most simply in the form of a flannel bandage or a rubber hot water

bottle. Thermogene wool, antiphlogistine, and poultices may be used.

When pain is severe and the patient unable to vomit, complete relief may be obtained by the removal of the contents of the stomach by means of a tube. In cases of gastroptosis or, as has been already described, in cases where the stomach is apt to undergo a sudden drop with corresponding sensations, exercise such as walking on the hands and feet strengthens the abdominal muscles. Massage of the abdominal muscles is of value, but one of the most effective of all treatments is by means of a belt. But it is important that considerable pressure should be exercised by the belt on the lower part of the abdomen just above the symphysis pubis. It may be advisable to have a conical pad made and fastened inside one of the more usual forms of belt, so that this pressure may be exercised. It probably acts by preventing the sudden dropping of the stomach, and its value can be assessed by an observation of Leven's that by pressing the fist into the epigastrium of these patients pain is produced, which may be completely alleviated by pressing in with the other fist just above the symphysis.

REMARKS ON MANIPULATIVE SURGERY OR BONESETTING.*

BY

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FROM time to time much criticism has been published by the lay papers on the after-treatment of bone and joint injuries by our profession, whilst the treatment by bonesetting or manipulative surgery—as it is now termed—by unqualified practitioners, has been proportionately extolled. The question occasionally arises as to the probable origin of this humble branch of surgery. Dr. Wharton Hood, to whom the profession was originally indebted for the elucidation of the bonesetter's secrets, held the opinion that "the first bonesetter was the servant or unqualified assistant of a surgeon who had known exactly what could be done by sudden movements and how the movements should be executed." This theory is, of course, possible. Waterton, the naturalist, who many years ago wrote much on the subject, says that "this art is practised not only in England but throughout Europe as well, and that in Spain he bears the significant name of *Algebrista*." As a matter of fact he does not; the name is *cirujano algebrista*, in France he is termed *un rebouteur*, but Waterton is correct in saying this mode of treatment exists throughout Europe. Personally

I believe that some such rough-and-ready method of treatment has always existed, but that its utility got overlooked during the time surgery was developing into a definite science. As our professional ancestors progressed in their knowledge of pathology, such a condition as tubercular disease began to be more generally understood, and the importance of quietude in this and other acutely inflamed joints was soon realised. In consequence of the general appreciation of the value of absolute physiological rest in these cases, it was not long before it was considered essential for the treatment of all painful and swollen joints, no matter from what cause. The cult of complete rest became to be deemed so necessary that it was never considered advisable to use a joint as long as the least pain was experienced on attempted movement, thereby reminding one of the boy who was forbidden to enter the water till he had learned to swim. The universal adoption of these principles by the profession caused anything in the way of more vigorous treatment of injuries to remain in the hands of the less educated classes who, "rushing in where angels fear to tread," frequently obtained brilliant results from their unorthodox methods. Thus it happened that many vendors of herbs and simples resident in country places came to specialise in this business, which, unlike the majority of folklore remedies, contained, in the words of *The Lancet*, "some long-forgotten truth."

HISTORY OF BONESETTING.

The only book on this subject for many years was by Dr. Wharton Hood, who, in 1871, from personal observation of a celebrated bonesetter called Hutton, was able to disclose to us the methods

* A Lecture delivered before the South-West London Post-Graduate Association on March 17th, 1926.

employed. In 1880 Mr. Bennett, a very well-known bonesetter from the Midlands, brought out a book the "Art of the Bonesetter," to which I am greatly indebted for some historical information. Unfortunately, beyond acquiescing in the correctness of the movements detailed by Dr. Wharton Hood, he gives no hints as to his own procedure. He does, however, lay claim to treating recent dislocations and fractures as well as old-standing cases of impaired limbs. So far as I can find out no other unqualified man or bonesetter has ever committed his methods and experiences to paper. In 1911 and again in 1915 I published books on this subject, and quite recently Mr. T. Fisher has brought out a treatise on "Manipulation." The general public have always shown themselves greatly interested in the cures achieved by the so-called art of bonesetting as practised by its unqualified exponents. Doubtless this is in some measure due to an inherent belief in all occult methods of treatment which, even in these days, exists amongst all classes of society. At the same time a mistaken notion still leads them to believe that only certain individuals are endowed with some peculiar gift of healing by manipulation. Nevertheless, credulity alone would not be sufficient to keep interest alive were it not founded on something more definite; and it must be granted that treatment at the hands of unqualified practitioners often brings about quick and permanent cure, even in cases where the highest surgical skill has been sought in vain. The old idea that these cures wrought by bonesetters are brought about by the reduction of an overlooked dislocation still holds good in the public mind. The historical diagnosis of "Bone Out" may be accounted for by the fact that these men, being for the most part totally ignorant of the true nature of the lesion, were misled by the crack of the rupturing adhesions, and, finding that increased mobility followed their ministrations, were honestly convinced that a bone had been restored to its place. In parenthesis I might mention that I am not here referring to the movements connected with osteopathy. Many of the bonesetting fraternity still adhere to this popular error, though, it is but fair to add, the best known of them hold no such mistaken view. Survival of this incorrect diagnosis has, I believe, done much to prevent medical men inquiring more fully into the meaning of these present-day cures. Satisfied that no obvious ankylosis or anatomical displacement existed in some case cured by manipulation, they are inclined to dismiss further discussion of the question. On the assumption that the result has been probably achieved by suggestion no attempt is made to connect it with the modern aspect of the old-fashioned bonesetting of which they are well informed. All the same, from the patient's point of view, accurate diagnosis is not nearly so important as successful treatment. It is only human that the lay mind should prefer to accept the opinion of the man who erroneously states a "bone is out" and then works a speedy cure, in preference to believing the doctor who

correctly maintains there is nothing anatomically wrong, but can offer no other advice than that time will probably bring about recovery.

FAMILY TRADITION.

In all probability, not only in England but practically all over the world, this method of treating injured limbs by what is called bonesetting has always been in existence. In some country districts the same family for many generations past has had one of its members carrying on the trade of bonesetter. Mr. Dacre Fox, writing to *The Lancet* in 1882, detailed three years' experience he had with Taylor, a celebrated bonesetter of Whitworth, Lancashire, whose family had been bonesetters for more than 200 years. The different movements and methods of procedure were treated as business secrets and handed down from father to son or some near relative who might show aptitude or desire to take up the calling. Nearly all the present-day bonesetters can trace a relationship to a former exponent of the art, and in many cases have made considerable advance in their knowledge of the treatment their forefathers taught. As an instance of family tradition the celebrated Richard Hutton, after a successful career as an upholsterer in Tottenham Court-road, in his late middle age took up as a relaxation the business of his grandfather, a Yorkshire bonesetter, by whom he had been taught. He was succeeded by his nephew, also named Hutton. Hutton junior was followed in due course by a relation, Professor Atkinson, a veterinary surgeon who lived and practised in Park Lane, where his successor, and I believe relative, up to quite recently practised.

MRS. MAPP OF EPSOM.

Apart from the fact that these men looked upon their knowledge as a secret to be jealously guarded from any inquiries, they were usually drawn from the humbler and less educated classes, hence until the publication of some papers on "Bonesetting so called," by Dr. Wharton Hood in 1871, no literature existed on the subject. References in the public press, however, as nowadays, were not uncommon as far back as 1736, and the *London Magazine* brings into considerable prominence the claims of a certain Mrs. Mapp, who lived at Epsom. Mrs. Mapp was the daughter of a Wiltshire bonesetter and speedily made a great name for herself. An article in the paper states:

"The concourse of people to Epsom on this occasion is incredible, and it is reckoned she gets nearly 20 guineas a day, she executing what she does in a very quick manner. She has strength enough to put in any man's shoulder without any assistance; and thus her strength makes the following story probable. A man came to her, sent as it is supposed by some surgeons on purpose to try her skill, with his hand bound up and pretended his wrist was put out, which upon examination she found to be false; but to be even with him in his imposition she gave it a wrench which really put it out and bade him go to the fools who sent him and get it set again, or if he would come to her that day month she would do it herself . . . It is further stated that since she became famous she married Mr. Hill

Mapp, late servant to a mercer on Ludgate Hill, who, it is said, left her and carried off £100 of her money."

Besides practising at Epsom she used to come to town once a week in a coach and four and return bearing away the crutches of her patients as trophies of honour. She held her levees at the Grecian Coffee House, where she operated successfully upon a niece of Sir Hans Sloane. The same day she straightened the body of a man whose back had stuck out two inches for nine years; and a gentleman who went into the house with one shoe-heel six inches high came out again cured of a lameness of 20 years' standing and with both his legs equal length. On the other hand, one Thomas Barber, tallow chandler, published a warning to her would-be patients, from which we may deduce that success was not always achieved. The cure of Sir Hans Sloane's niece was the talk of the town, and Mrs. Mapp became quite a famous character. A comedy was announced at the Lincoln's Inn Fields Theatre called "The Husband's Relief," or "The Female Bonesetter, and the Worm Doctor," Mrs. Mapp being present at the first night. In this play a song in her praise runs as follows:—

"You surgeons of London who puzzle your pates
To ride in your coaches and purchase estates,
Give over for shame, for your pride's had a fall
And the doctress of Epsom has out-done you all.
Dame Nature has given her a doctor's degree
She gets all the patients and pockets the fee,
So if you don't instantly prove it a cheat
She'll loll in a chariot whilst you walk the street."

At the height of her prosperity Mrs. Mapp gave a plate of ten guineas to be run for at the Epsom races, and the first heat was won by a mare called "Mrs. Mapp," which so pleased the lady that she gave the jockey a guinea.

The fair bonesetter's career, however, was short, and she died in poverty, according to a notice in the *London Daily Post* of Dec. 22nd, 1737. It would appear, therefore, that bonesetting has always been a fruitful source of copy to journalism.

Curiously enough, the word "bonesetter" has no connexion with the surgical skill necessary to obtain good position in fractured bones. The origin of the word is hard to find, but its practice has been known from time immemorial. Dr. Wharton Hood defines it "as the art of overcoming by sudden flexion or extension, any impediment to the free motion of joints that may be left behind after the subsidence of the early symptoms of disease or injury." It was in 1871, as I have mentioned, that Dr. Wharton Hood published in *The Lancet* a series of papers describing the methods used by Hutton, who had a world-wide reputation.

THE MEANING OF THE MYSTERIOUS MOVEMENTS.

For the first time the real meaning of these mysterious movements referred to by so many patients was made clear to the medical profession. The question of bonesetting at once received considerable attention in medical circles. Papers were read at various meetings on the subject, when it received full discussion. Mr. Bruce Clark was

amongst the first to describe, from dissection on the joints of amputated limbs, the real nature of the adhesions which caused the disability capable of being cured by free movements. In the course of his lecture, he advised surgeons to consider seriously the question as to whether prolonged rest in all cases of injury was absolutely necessary, since undoubtedly it was the cause of these adventitious bands being formed. Some years previously, Sir James Paget, in a lecture, "Cases which Bonesetters Cure," had given similar advice by saying: "Sprains may often be quickly cured, freed from pain, and restored to useful power by gradually increased violence of rubbing and moving."

Mr. Dacre Fox, of Manchester, whom I have already mentioned, about the same time contributed an interesting article pointing out that bonesetters in the north did not entirely confine their work to the treatment of old injuries, but were constantly employed by their clients for recent sprains and dislocations which they treated with marked success. In fact, it would appear that these men, though possessing no training in surgical and anatomical knowledge, were in the habit of rubbing and moving recent injuries long before early movement and massage was deemed a correct method of treatment by the medical profession. An old-time Lancashire bonesetter, on being questioned as to the reasons for treating sprains in this way, replied: "What has been caused by violence must be cured by violence." From this epigrammatic remark one might almost define bonesetting as being homœopathic surgery, since *similia similibus curantur* best describes its methods. The movements adopted are not, as some imagine, merely haphazard in direction and amount of violence; whether employed for breaking down adhesions, moving sprained joints or reducing dislocations, they were the outcome of a certain knowledge, and with regard to such movements in recent cases of trauma they may be considered the precursor of modern massage. This knowledge, combined with constant practice, observation, and experience, made the bonesetters conversant with the situations where adhesions were most commonly found in the different joints, and I think it is quite feasible that besides the carefully studied movements used by them for breaking down adhesions they employed routine manipulations for reducing various dislocations, much on the same lines that Kocher describes in his method for the reduction of a dislocated humerus.

Dr. Wharton Hood, Howard Marsh, and others, however, considered that any successful treatment of dislocations at the hands of these men was merely a matter of luck. On the other hand, Dr. Schivardi, of Milan, in 1871, asserted that a woman, Regina Dal Cin, a well-known bonesetter of Trieste, not only broke down adhesions by methods similar to those employed by Hutton, but successfully reduced dislocations as well, some being of long standing. She, it may be interesting to note, was the descendant of a long line of bonesetters, and at one time received permission to

practise in Vienna, though the permit was eventually withdrawn.

MODERN METHODS IN RELATION TO BONESETTING.

From this time onward the medical profession recognised the benefits to be derived from the hitherto despised practice of bonesetting. Not only did they adopt similar methods for treating joints ankylosed by adhesions, but by modifying the period of complete rest in sprains and fractures they lessened the chances of such a condition arising. Gradually the employment of massage, heat, and electricity came to be accepted more generally in this class of injury, so that nowadays it is almost universally advised as affording the best results. The adoption of this more active mode of treating injuries has had the curious effect of reviving the cult of the unqualified practitioner. This recrudescence may be attributed to the following causes. In consequence of these modern methods practitioners have had less necessity or opportunity for breaking down adhesions, and it would seem they have apparently forgotten that bonesetting might occasionally prove a valuable adjunct to treatment.

Just as the majority of surgeons 50 years ago closed their eyes to the lessons being taught by Hutton, Matthews, Mason, Bennett, and a host of lesser well-known bonesetters who were competently and constantly treating the old-fashioned rigid joint, so the modern practitioner is apt to look askance at the work of the present-day so-called manipulative surgeon who has adapted his treatment to the conditions existing where the utility of a joint is slightly impaired by some defect, which, though not sufficient to cause complete lack of movement, yet is capable of being both irksome and painful. The number of patients suffering in this way who attend the consulting-rooms of unqualified practitioners is far greater than might be supposed, and the incomes earned in consequence by some of the London bonesetters would be a revelation to the medical profession. One of the best known amongst them informed me a few years ago that he was occupied all day and every day treating various forms of defective joints. It is obvious, therefore, that our profession are, to a large extent, either chary of trying this simple form of treatment for themselves, or are ignorant of the benefit to be obtained by its adoption, especially in those vague conditions of impaired mobility where the patient complains more of a deviation from the normal than of anything markedly defective. During my student days, though we were taught the pathology of adhesions and the possibility of their appearance in joints after injury, beyond the fact that the ensuing disability could be remedied by "breaking down," no instruction or information was vouchsafed as to the best way for setting about the act. Dr. Wharton Hood, himself an observer of Hutton, to whom I am ever under a great debt of gratitude for

many acts of kindness, first showed me what good results could be obtained by forcible movements skilfully applied in suitable cases.

Massage.—Nowadays the value of massage in the treatment of a trauma is well appreciated by medical men, but I have often been impressed by the fact that, owing to want of instruction when students, few of them are able to give definite directions to their masseurs. They will say, "We will order massage," but they cannot go and say when necessary to the masseur at work, "That is not right." Sufficient attention is not paid to my contention that massage is a very important factor and, moreover, in itself is manipulative treatment, necessary to be administered in the earliest stages of injury by one method, and in the later stages of delayed recovery by something more vigorous. I am of opinion that our profession should make themselves more acquainted with the technique of massage; they are too ready to trust their patients to anyone with the title "qualified masseur."

BREAKING DOWN FIBROUS ADHESIONS.

I do not propose describing the various forms of ankylosis, and it may be assumed that reference is made to fibrous adhesions caused mainly by trauma, though certain cases may be included where disability has been occasioned by the so-called rheumatoid arthritis. I have seen adhesions appear within three weeks of injury, but their capability of interfering with the normal action of a joint depends largely on their situation. They may exist within the joint itself, binding together the articular surfaces and folds of synovial membrane, or be entirely peri-articular when the surrounding tendons have become adherent to their sheaths through tenosynovitis. The resulting disability may vary from complete ankylosis of the joint to a condition where pain is only elicited by some particular movement. An important point to bear in mind is that a joint need not be entirely incapacitated by adhesions to require manipulation. Indeed, in these days of early massage and movement, complete ankylosis is rare compared to what it was in the time when absolute rest was considered essential for the treatment of bone and joint injuries. Hence, it frequently happens that the possibility of some small adventitious band is not suspected, provided the joint moves with comparative freedom, and it is especially in these cases that the modern bonesetter proves so successful. Careful examination in such cases will reveal a painful though comparatively slight interference with the normal range of movement, to cure which forcible manipulation will be just as necessary as in joints whose action is entirely crippled by adhesions.

Unless contra-indicated, when adhesions are to be broken down, an *anæsthetic* must always be given, not so much for the avoidance of pain as to ensure complete relaxation of the muscles. By dispensing with an *anæsthetic* the difficulties of

the operation are increased, as it will be necessary to overcome muscles, which the patient will involuntarily put into action for the protection of the joint, before the adhesions can be satisfactorily ruptured; at the same time, a risk is run of severely spraining or rupturing the contracted muscles. It is possible that where severe inflammation has followed forcible movements these points have not been observed. Where manipulation has been properly performed no untoward result need be feared, as there is nothing in the rupture of fibrous bands to cause inflammatory action, provided the case is otherwise suitable.

Generally speaking, the movements should be performed in a swift, even, and firm manner, so that a joint undergoes the motions of its normal action, though not necessarily to the full extent of its range. The reason of this is that the muscles will have contracted in proportion to the limitation of movement permitted by the adhesions, and once that limit has been overcome, the contraction of the muscles will be the only impediment to the normal range. The adhesions once ruptured, after-treatment will speedily restore the elasticity of the muscles, which might well be strained should the full extent of movement be at once sought. In cases of long standing the adhesions yield with a distinct audible snap or crackle, others of less duration with the noise of tearing wet parchment, whilst those of still more recent date, though giving no audible sound, can generally be felt by the fingers of the operator. Experience shows that rapidity in the execution of the movements gives rise to far less after-pain than if the adhesions are broken down by slow and deliberate stretching, but care must be exercised against jerks or undue violence. When taking hold of a limb the grasp should be just above and just below the affected joint, for though a more powerful leverage can be obtained by more distant grips, yet it is as well to bear in mind that other structures may be broken besides adhesions, whilst in the young there is danger of separating the epiphyses.

After-pain is certain to be present in varying degrees, but will pass off in the course of an hour or so, and provided sufficient care has been taken in the operation no apprehension need be felt on this point. Within a few hours the joint should be gently massaged and movements aided. On commencement the massage must be of the lightest description, and should consist of gentle stroking movements in the direction of the trunk. As the pain subsides the rubbing can be of a more vigorous character, and voluntary movements of the limb aided and encouraged, but all semblance of roughness must be avoided. The rubbing should last about 20 minutes to half an hour. The mere allowing a joint to remain quiescent for 48 hours, as is sometimes recommended, is not safe; sufficient time may thus be given to allow the freshly-ruptured adhesions to reunite. Notwithstanding the pain, every effort should be made to keep the joint free, and on no account should any bandage or splint

be applied. It will be found that the rubbing, if skilfully performed, gives great relief from the pain, and any local application is scarcely ever requisite.

Occasionally, full movement and freedom from pain follow the manipulations, but this ideal result is rare. More often a patient is quite unable to move the joint beyond the extent obtained under the anæsthetic, the explanation being that though there is no longer mechanical obstruction in the joint, the muscles from disuse are so wasted and contracted that they are physically incapable of normal work. To dismiss a patient without correcting this condition is to court almost certain failure. Merely ordering the joint to be used is, for the most part, useless, as few people have the strength of will necessary to make muscles perform their proper functions at the expense of pain. It is the custom of a large number of operators to administer an anæsthetic on two or three subsequent occasions for the purpose of overcoming the muscular resistance. This should never really be necessary if the adhesions have been properly dealt with at the time of the operation, and the most satisfactory treatment after the first two days consists in substituting for the rubbing graduated exercises by means of weights and pulleys. These exercises, though possibly painful, must be performed daily, when it will be found that increase of strength and mobility bring decrease of pain. Exercises should be diligently persevered in till the muscles have regained their former bulk and the joint its full power of movement.

SOME IMPORTANT POINTS: RADIOGRAPHY.

Such are the broad principles upon which bone-setting is based, and though, in certain particulars, the procedure which is set out differs from that advised by some surgeons, it embodies the experience gained in a large number of cases in which success has followed its adoption, and follows the technique used by Hutton. A certain delicacy of touch is doubtlessly requisite properly to appreciate that lesion, whilst the correction of it largely depends on knack, but both can easily be acquired by experience and practice.

Before describing the various movements which will be required for each joint, it may be as well to emphasise some of the more important points to be observed in their performance.

In the first place, an anæsthetic should always be employed even for the apparently trivial cases, as, apart from the chances of meeting with undue muscular resistance, the pain experienced by the patient is sometimes out of all proportion to the amount of disability present.

Secondly, the movements should be executed in a quick, smooth manner, avoiding all jerks and undue violence.

Thirdly, in seizing the limb, a short leverage should be taken for fear of fracture.

Once the adhesions have ruptured, full movement of the joint must not be sought at the risk of overstraining the contracted muscles.

In all cases in which diagnosis is doubtful, it is advisable to obtain a radiograph of the joint in order that any morbid condition may be excluded.

As an example of the importance of radiography, I will quote a case which recently came before me. A boy was brought to me a short time ago with a history of a strain at football some two months previously, resulting in a knee in which there was limited extension and a sensation of "nipping" in front of the internal aspect of the joint, very suspicious of a fringe of hypertrophied membrane or possibly an organised blood-clot. I was asked if I would manipulate to reduce this and straighten the joint, and bearing in mind my views on this point I advised a radiograph, and there in the middle of the joint, just on the internal aspect of the condyle of the femur, was a distinct erosion, and there is no question that it was a tuberculous joint. Had that joint gone before some of the unqualified bonesetters they would very likely have manipulated that joint with grave risks to the patient. In addition to the question of manipulation of a joint, tendons and muscles are very liable to a painful depreciation of movement as a result of trauma, which can often be rectified by this method of treatment when less drastic efforts at obtaining recovery have failed.

ILLUSTRATIVE CASES.

Before proceeding to demonstrate the various movements that I have found suitable for each joint, I will quote some cases from my own practice as examples of the type of disability capable of being cured by these means.

A lady came to see me who had dislocated her right shoulder five months previously by a fall out hunting. The dislocation had been reduced under an anæsthetic and treated on orthodox lines. Seven weeks later the joint was moved or "freely wrenched," as I was informed, under anæsthesia, but so great had been the pain and swelling that it was once more bound to the side. Massage was ordered in the course of the next week, and continued from time to time up to the date she was brought to see me. On examination, the arm could be moved backwards and forwards to a certain extent; rotation was entirely absent and abduction very limited, though rotation of the scapula gave the spurious appearance of fair movement. Any attempt to obtain movement beyond these limited areas caused acute pain. Under an anæsthetic the adhesions were broken down according to routine, but muscular shortening prevented full range of movement. This muscular contraction yielded to the ministrations of a highly skilled masseuse together with graduated exercises, and the patient within 14 days regained a normal arm.

The next case is that of a young man who fell on his out-stretched hand, which was consequently severely sprained. Four months later he saw me, because, in spite of radiant heat, massage, ionisation being meticulously carried out, his hand was exquisitely painful on certain movements. On examination, there was much induration and loss of movement between the fourth and fifth metacarpal bones, and any attempt to move them, as in shaking hands, caused the pain. Radiograph was negative. Manipulation under anæsthesia, followed by a few days of massage, restored the hand to normal.

As an example of muscular lesions to which I have already referred, I give the following example:—

A man sustained a tear of the adductor muscles of the left thigh whilst out hunting. He was treated by electrical

and other means, but in spite of massage, electrical and other forms of treatment he had arrived at a condition where any attempt to sit on a horse when jumping gave rise to such pain that for the last two years he had been debarred from the enjoyment of this sport. On examination, there was induration of the adductor muscles and tenderness at the pelvic attachment. At the same time abduction of the thigh was slightly defective as well as external rotation. On the assumption that this condition was due to a matting of the muscular fibres, and possibly the presence of some adhesions in the tendon sheath of the adductor longus, I suggested stretching and kneading of the parts. Under anæsthesia I manipulated in the manner I will shortly describe. This was followed by some massage and some graduated exercises. At the end of ten days he was able to hunt free of pain, and continued to do so the whole of last season. He played polo all last summer, and has been hunting this season up to date in complete comfort.

A lady out hunting last year fell and severely wrenched the right lumbar region. Twelve months later she was still unable to ride without pain, whilst any sudden jerk caused by a pulling horse caused intense pain. On examination, considerable induration in the right lumbar region. Lateral rocking, swaying of the trunk was painful and limited when trying to lean towards the left. Pain was elicited by raising the arm and attempting to lean over towards the left as if a portion of the latissimus dorsi was involved in the lesion. A radiograph proving negative, I stretched these muscles under an anæsthetic, and, as usual, followed this by a few days massage and some graduated exercises. Three months later I received a letter to state that she had been hunting up to date and "my back is now quite sound."

Now out of these examples in the first case mentioned—namely, the shoulder—most people would agree that there was necessity for breaking down the adhesions, but few realise or appreciate that the manipulation should be done methodically with the definite routine which I propose to demonstrate. In no case where those movements are correctly carried out should there be more than transitory pain, and no effusion or inflammation of the joint ever follow. Unfortunately the absence of a studied technique is often the cause of trouble following haphazard attempts at so-called bonesetting.

The remaining cases I shall demonstrate illustrate my contention that our profession are apt to overlook the value of manipulation. In the case of the hand, practically all movements were normal and pain only elicited by certain actions which merely prevented the patient indulging in boxing. Incapacity, however, still existed in spite of receiving the whole gamut of treatments to be found in massage and electro-therapeutic departments, and it was not till some adhesions were broken down by bonesetting methods that recovery took place, whilst in the purely muscular types the amount of limitation of movement was very small and pain only brought on when strain was added to the attempted movement, such as occurred when hunting.

Some 20 years' experience in this line of work convinces me that there is still something to be gleaned from the procedure of the modern Huttons in spite of our increased knowledge of the subject, and I counsel my profession to bear in mind to-day the advice given by Sir James Paget many, many years ago, "To copy what is good in the practice of bonesetters."