BACK PAIN

Diagnosis and Treatment
Using Manipulative Techniques

by

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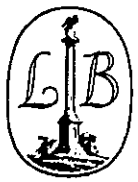

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Therapeutic Manipulation

The maneuvers used in therapeutic manipulation are, with one exception, exactly those used in the diagnostic techniques which have been fully described in the preceding chapters. There are two or three additional maneuvers for certain joints which are described later (pages 116–124).

The therapeutic techniques differ from the diagnostic techniques in only one respect: whereas in the diagnostic examination the examining movement stops when the sign of pain is elicited, in therapy the same manipulative maneuver takes the joint through the pain point to the completion of its normal range of movement. For this reason alone it is essential, therefore, for the would-be manipulator not only to be familiar with the normal average range of movement at all joints, but also to become aware of each individual patient's normal range. Usually this is possible to ascertain, because in traumatic cases, even in the back, the joints on one side will be affected while those of the other side will remain normal.

No one should attempt therapeutic manipulation of any joint until he is perfectly facile in his ability to put a normal joint through its normal range of movement; this means practicing on normal subjects. Nor should anyone attempt therapeutic manipulation of a spinal joint until he is adept in his technique of manipulating the more easily handled joints of the extremities.

In practicing on the normal subject, each manipulative movement should be absolutely pain free; if the normal subject experiences any discomfort on the performance of any movement, then the technique of performance of that movement is wrong.

Perhaps the greatest difficulty in explaining the subject of manipulation in writing is that manipulative therapy is an art. The techniques of an art can only be taught with any certainty by practical demonstration. It is my experience that it takes six months for a well-trained physician in preceptorship training on patients and practicing on the normal subject after hours to master the science of diagnosis and the art of therapy, using manipulative methods. Thus, to learn this subject is a formidable undertaking for an active medical practitioner. But if it is worth doing, it is worth doing well. Anything but the use of correct technique places the patient in jeopardy and the reputation of the method will suffer rather than the reputation of the practitioner of the method.

The use of manipulative therapy in medicine is twofold: first, it is used for the relief of pain arising from joint dysfunction; secondly, it is used to restore the range of movement to a joint whose function is impaired. These aims are not synonymous, for it is possible to relieve pain arising in or from a joint without subjectively altering the voluntary range of movement.

Though occasionally one uses movements in the voluntary range of movement in manipulating certain joints of the extremities, no therapeutic manipulation should be concerned with voluntary movement in joints of the spine. All therapeutic movements of the joints of the spine should fall within the range of the movements of joint play.

It must be stressed that the restoration of normal joint function in spinal joints not infrequently relieves symptoms mistakenly diagnosed as arising from the viscera.

Joint dysfunction does not necessarily give rise to pain locally in the joint; joint dysfunction may give rise to a pain symptom at any place which shares a common nerve supply with the joint. It is partially for this reason that manipulative therapy enjoys a spurious reputation in some quarters. It is well recognized that gall bladder disease may produce, as its presenting symptoms, pain at the level of the eighth thoracic vertebra. Coronary artery disease may present pain at the level of the fourth thoracic vertebra, as well as in the left shoulder and arm, and in the jaw. The reverse situations are (1) when dysfunction of the interlaminar joints between the fourth and fifth thoracic vertebrae gives rise to pain over the precordium, which can easily be misdiagnosed as pain in the heart, and (2) when dysfunction of the interlaminar joints between the eighth and ninth thoracic vertebrae gives rise to pain over the gall bladder, which can be misdiagnosed as pain in the gall bladder. These facts are accepted only with the greatest reluctance, if at all. In the case of referred precordial pain, occasionally mistaken for angina, the similarity of the symptom goes further, for the pain from the joint dysfunction also is worse with exercise and is relieved by rest just like anginal pain.

There is also the example of confusion between joint dysfunction of the right sacroiliac joint and acute appendicitis. These diagnoses may be confused because of the close relationship between McBurney's appendix point and Baer's sacroiliac point. The latter, although not more than 1 inch away from the former, is located where the tender anterior sacroiliac joint ligaments can be palpated through the abdominal wall and has nothing at all to do with the possible location of an inflamed appendix.

Thus we find a perfectly reasonable basis in fact for the somewhat bizarre stories of miraculous cures by spinal manipulation

of all sorts of visceral diseases. Almost invariably the basis of these stories is that the patient has been told a diagnosis which he believes and remembers. If his symptoms are then unrelieved by orthodox treatment, but are later cured by a manipulator, it is not surprising that the patient claims to have been cured of the visceral disease. It does not seem right to conclude that the patient's symptoms must have been neurotic. Neurosis should never be diagnosed except on positive physical signs, any more than any other diagnosis should ever be made without positive physical signs. However, one must not forget that a "neurotic" may develop true pathology and that a normal person who seeks relief of symptoms arising from pathology and fails to find it may develop an overlying anxiety.

Therapeutic manipulation to break intra-articular joint or capsular adhesions in no way differs in technique from that used to restore loss of movement from simple dysfunction. It is true that occasionally in certain joints in the limbs some movement in the voluntary range may be employed to achieve this, but even in the extremities therapeutic manipulation of the joints should be confined to restoring the movements of joint play.

Rules of Manipulation

As with any form of treatment, there are indications and contraindications for joint manipulation. The specific indication for therapeutic manipulation is the presence of joint dysfunction or a loss of a movement or movements in the range of joint play. Contraindications for therapeutic manipulation are the presence of frank bone or joint disease or the absence of joint dysfunction.

A joint usually may safely be manipulated when there is an obvious history of sudden onset of pain at a time of joint stress or strain and when the patient states that rest improves his symp-

toms. If rest increases joint stiffness and or the pain in or from the joint, then some inflammatory or disease process should be suspected, and manipulation is contraindicated until these conditions are either ruled out or eradicated. Here it should be remembered that muscle pathology produces the symptoms of increased stiffness following rest. As it is unusual to find joint pathology without muscle pathology in the back, it may be difficult to assess the nature of the underlying joint pathology. In such a case rest of the muscles by support in a flexion cast for a few days, for instance, followed by another clinical examination, may be necessary before deciding whether manipulative therapy is wise or not.

There are certain rules of manipulation which must be observed in treatment if success is to be achieved. No more than one joint should be manipulated at one time; no more than one movement in one joint should be attempted at one time; and only one articular facet of that joint should be moved on the immobilized opposing facet. No abnormal movement must ever be imparted upon the joint being manipulated. No forceful movement must be imparted on it. The manipulative thrust, push or pull should be imparted only after the available "slack" in the joint has been taken up. No assistant should be used; the use of an assistant immediately forfeits the manipulator's absolute control of the manipulative movement. No manipulative movement must be attempted against muscle resistance. The movements of joint play, being involuntary (i.e., not under the control of voluntary muscles) cannot be achieved either by voluntary muscle action or in the presence of protective muscle resistance.

If the manipulator has to try to overcome muscle resistance to produce a manipulative movement, then this movement at once becomes uncontrolled, and probably damaging to the joint. The

manipulator must be absolutely relaxed himself or the patient will never relax. Also, if the manipulator is relaxed, it is more likely that his manipulating hands will follow the normal movement of the joint instead of perhaps erroneously trying to make the joint move as his hands wish it to, which may easily produce a harmful abnormal movement.

Use of Anesthesia

Controversy is always great when the subject of the use of joint manipulation with the patient under anesthesia is brought up. It is perfectly safe to use anesthesia so long as no departure is made from the normal manipulative techniques described. It is dangerous to try forcefully to produce a manipulative movement against muscle resistance. Anesthesia is used only to obtain perfect control over a joint by eliminating muscle resistance which cannot be eliminated by other means. It is used to prevent the use of force and not to facilitate it. In my own practice I use anesthesia for an initial therapeutic manipulation in about 20 per cent of cervical, lumbar or sacroiliac joint manipulations and in not more than 5 per cent of thoracic joint manipulations. The anesthetic which I prefer is unadulterated Pentothal following premedication with morphine, 1/4 grain, and atropine, 1/100 grain (in adults), given three-quarters of an hour before the manipulation. I condemn the added use of muscle relaxants, which should never be given without the patient being intubated, which makes a major procedure out of a minor one.

There is an area of the spine which has caused me trouble in manipulating under anesthesia, namely, between the ninth and eleventh thoracic vertebrae. When I have been manipulating the joints at these levels the patient has on occasion stopped breathing for a few moments — too often to be mere coincidence;

the reflex mechanism cannot be explained by reference to the recognized reflex arcs; but the fact should be remembered. It is a startling experience but the embarrassment of respiration is transient. Fortunately anesthesia is seldom required to allow controlled manipulation in the thoracic spine.

The use of local anesthesia is sometimes sufficient to allow the patient to relax adequately for a manipulative procedure to be achieved. The appropriate interspinous ligaments are infiltrated and paravertebral infiltration is used as well in an attempt to instill the local anesthetic into or around the ligaments of the facet joints. When dealing with the sacroiliac joints, it is often sufficient to infiltrate the posterior joint ligaments around the level of the posterior superior iliac spines. When dealing with the cervical joints, it is sometimes necessary to infiltrate trigger areas in the back musculature of the forequarters to obtain relaxation.

It is no more irrational to use anesthesia to provide relaxation and to avoid pain in joint manipulation than it is to use it for the reduction of fractures and dislocations, or, for that matter, extracting a tooth.

Results of Manipulation

Following a therapeutic manipulation, be it performed with or without anesthesia and be it performed for the relief of pain, for the restoration of function or for the breaking of adhesions, the patient should experience immediate relief from the symptoms for which the manipulation was performed. If there is an exacerbation of symptoms or no relief, then either the manipulative technique was wrong or the diagnosis was wrong and the therapy was not indicated. One should be able to predict the outcome of a therapeutic manipulation just as surely as a physician