Gedney 1938 second article OP six case reports

The Hypermobile Joint[1]

Further Reports On Injection Method

by Earl H. Gedney, D.O.

INJECTION of an irritant substance into elongated and slack joint ligaments to promote inflammation with subsequent shortening was first reported to the osteopathic profession by the writer in June 1937.[2] At that time it was made clear that the work was in a stage of preliminary development but that the splendid results in a number of cases of hypermobile knees and sacro-iliacs should be made known to the profession with the hope that other men would take up the work and be able to contribute to the statistics.

Since then the scope of this therapy has been enlarged to include recurrent shoulder dislocation, acromio-clavicular separation and subluxation of the sterno-clavicular articulations. Reports on the conditions treated and the technic of treatment will be forthcoming at a later date when the numbers justify them, but so far in a few cases the results are equally as encouraging as those obtained in the lower extremity and it would seem, on the basis of present observations, that eventually any accessible hypermobile joint may be treated and the joint normalized with injection therapy. However, this paper will be strictly limited to the diagnosis and treatment of the sacro-iliac and the knee in their states of abnormally increased motion.

Diagnosing Low Back Pain

In the diagnosis of low back pain caused by sacro-iliac hypermobility there are several things to consider. Historically there is the presence of recurrent sprain which often has defied the efforts of the best in the osteopathic as well as the orthopedic professions. In our cases it has varied from months to years of discouraging travel from one doctor to another. Patients have given histories of having had several types of supports and bandages, of having had all sorts of pelvic treatment—both the male and the female—all to no avail, though the usual report is that osteopathic treatment gave at least some temporary relief and that continuous treatment controlled the pain to a greater or less degree. The usual complaint is that the continued recurrence has been established by stooping or leaning in such a position as to lay greater than normal strain upon the sacro-iliac joints. The probable explanation of

[1]Read before Osteopathic Clinical Society of Pennsylvania, February 13, 1938.

[2]Hypermobile Joint, THE OSTEOPATHIC PROFESSION, June 1937.

: sustained sprain is that when the ain is placed bilaterally upon the nts the more mobile one slips out m under the load. This suddenly ces an additional load upon the un-pared musculature and ligamentous ucture higher in the lumbar spine, ich trauma it is unable to absorb ysiologically.

The tests used in the cases herein orted to ascertain the amount of tion in the sacro-iliac joints are as lows: for the right joint the patient placed prone on the table and the rator is on the left side. The palmar faces of the index and middle fingers the left hand are placed on the rum adjacent to the opposite ilium a line with the first sacral spine, l with the right hand the right leg lexed at the knee to an angle of 90 grees with the thigh. Using the leg a lever the thigh is externally rotat- which in turn through the "Y" ament rotates the ilium posteriorly. this maneuver any excessive degree motion, whether posterior slip or ation, can readily be distinguished the palpating finger tips. To note erior motion the finger tips are intained in their position while the e hand grasps the extended knee l fully extends the thigh on the nk. Conversely, similar tests are ap-d to the left sacro-iliac. These ma-vers will aid materially in differen-ing this joint as the offender in ny low back strains.

In the knee hypermobility is very dily recognized—in fact it is diag-ed by the patient usually as a pped cartilage" or torn ligament urring usually on the medial side. e former has been taught to them, a rule, while the latter is their own pression. Both conditions are prob-y true, though the collateral liga-nt and adjacent capsule must tear ore the tibia can rotate enough to the cartilage. The cartilage must accompany the articular surface of the tibia due to the coronary ligament attachments. The condition, then, becomes one of tibial hypermobility due to the collateral ligament laceration and is recurrent because the collateral ligament can no longer keep the tibia in its proper relation to the superimposed femur. This injury is sustained most frequently in squatting or pivoting, or in clipping, though often in other forms of direct trauma.

In the acute phase there is present some synovitis and the patient is unable to completely extend the knee or to extend it without pain of a greater or less degree. Appropriate treatment must be given to reduce the affected tibia or cartilage if it is torn loose from its moorings, general anesthesia often being required for sufficient muscular relaxation.

Laxity of the collateral knee ligament is usually to be noted on the painful side, whether medial or lateral, though often both sides are affected and require treatment. A rather simple test is to have the patient in dorsal decubitus and to have the operator step to the affected side and flex the knee over his own, (there is a bar under the sides of my table which, when my foot is placed on it, brings my knee into a convenient position). Grasping the foot, he rotates the tibia beneath the femur while its motion is noted with both the eye and the free examining hand.

All cases are X-rayed both locally and posturally, and in the majority the offending knee has been found to be on the anatomically long side. What this means is hypothetical, but it probably has some significance in the cause and maintenance of the lesion.

Technic of Injection

The technic of injection remains the same as that described in the preliminary report (loc. cit.). The usual anti-

septic precautions are taken with the use of any of the less irritating solutions such as tincture of merthiolate 1/1000 or 50% alcohol. So many people are sensitive to iodine in whatever percentage that its use is probably not advisable where a constricting bandage is to be employed post-operatively.

For the sacro-iliac, small amounts of the solution are placed deeply in the posterior sacro-iliac ligament throughout its entire length and breadth. The landmarks used are the posterior-superior spine of the ilium and the first sacral spine. Mid-point between the two structures a needle of varying length, depending upon the depth of the overlying tissues, is inserted through the skin and carried down to the ligament at an angle of about 45 degrees with the plane of the dorsum, the point directed lateralward. It can be felt to engage the fibrous structure and to pierce it. From this one point of entrance the entire ligament can be injected by maneuvering the needle as the spokes in a wheel cephalad and caudad using 3-5 cc. of NeoPlasmoid.

For the knee ligaments the vantage point is one inch anterior to the tibial or fibular collateral. The needle point is carried down to these structures and from 2-3 cc. of solution is injected into and around either ligament.

Post-Operative Treatment

The post-operative treatment includes a mild sedative such as aspirin gr. X for the first twenty-four hours. The sacro-iliac patients wear an ordinary two-inch belt of whatever material they may select, with crotch straps to hold it down beneath the level of the anterior-superior iliac spine, though this is not always necessary. Several female patients have had excellent results wearing only their ordinary elastic girdles. The knees require only an elastic knee cuff worn at all times during treatment when patients are on their feet, though several have disregarded this factor with impunity.

The first few weeks they are warned to remember that they have a "weak back" or a "weak knee" and to take care of it, laying no strain upon it, but after that their normal activities are advised and encouraged.

A heel lift is advised under the short leg equivalent to half the deficiency measured on the X-ray film according to our technic. This is a matter of precaution and by no means dogmatic, since it has been violated by a number of patients seemingly without damage and positively could not be used by others due to the leg and low back discomfort.

Trauma to the sacro-iliac and knee with resultant hypermobility has frequently accounted for the sudden termination of the career of many a promising or even well established athlete and this treatment will be hailed by them as a God-send not only in the relief of pain but in the re-establishment of joint integrity and the ability to resume their activities.

Case Reports

The following are typical case reports.

A young high school athlete, Wm. H., age 18, a first class lineman. He had played few full games during the past three years, often being laid up two to three weeks because of a faulty knee. Treatment was begun and continued at weekly intervals until nine injections were given. He was treated on Saturday night so that the period of pain lasting two to three days would not complicate practice and the Friday game. He has played every game through to completion and is playing regularly with the basketball squad. He can use the leg in any position, can pivot without pain or worry, and on at least one occasion it re-

covered normally from severe trauma involving the entire joint.

Another boy of athletic leanings, Wm. L., age 17, sustained a severe back sprain in almost any competitive sport. He now wrestles and plays basketball with no recurrence. He has had eight injections into the left sacro-iliac ligament at the same intervals, beginning July 15, 1937.

There is also the case of the drayman, Mr. P., age 45, who had constant low back pain for six years. His only relief from it was a half day after an osteopathic treatment. Three injections into the right sacro-iliac ligaments were sufficient to restrict the joint motion and to eradicate his symptoms and he has had no pain in six months.

A very interesting case is that of the young woman, Mrs. M., age 32, who had constant low back pain of five years' standing having its etiology in pregnancy. As usual, this defied all methods of treatment. The replaced sacro-iliac would be out again within the hour, and though braces gave her some relief there was seemingly no cure. She was referred to me as a possible hypermobile case. The diagnosis was correct, and after six injections into the affected joint she is entirely relieved and has remained so the past seven months.

An Italian woman, Mrs. R., age 26, has never known since childhood what it is to be free of backache, etiology unknown. Seven injections into the affected sacro-iliac ligaments entirely relieved the pain with no recurrence.

This treatment has its application as well in those cases where the condition is one of excessive motion due to other causes, including absorption of joint cartilage, thus shortening the distance between the ends of the ligaments. I have had several cases where treatment has been very effective in the latter pathology.

One was a Mrs. B., "over 70 years," who due to an unstable knee fell several times under precarious circumstances while crossing streets. Two injections into the medial collateral ligament so reduced the range of tibial motion that she has had no falls for nine months and there is now a feeling of security which was absent before treatment, though there is some pain from advanced arthritis.

In presenting this paper I am deeply grateful to the Philadelphia College of Osteopathy for permission to establish a clinic in conjunction with the Osteopathic Technic department to further the study of this therapy. I am grateful also to the manufacturers of the solution for having so graciously provided the materials for its advancement, and I hope that many of my fellow practitioners will take up the work and report their results.