Dynamic Chiropractic

CHIROPRACTIC TECHNIQUES

The Art of the Chiropractic Adjustment: Part V

Richard C. Schafer, DC, FICC

This series of articles has strived to define certain general principles that underlie almost all chiropractic adjustive technics. Parts I and II reviewed depth of drive, the articular snap, segmental distraction, timing the adjustment, the advantages of placing the patient's spine in an oval posture, correct table height, and patient positioning objectives. Part III summarized the factor of time in the clinical approach and its underlying biomechanical principles of tissue viscoelasticity, fatigue, creep, and relaxation. Part IV reviewed the need to visualize the loading effects on articular cartilage, joint lubrication, action of the intra-articular synovial tabs, and the articular planes to deliver a corrective thrust most effectively. Here we shall describe the fundamental types of contact, contact points and their options, securing the contact hand and direction of drive.

Types of Contact

The type of contact used in applying a chiropractic adjustment is optional in most situations. The broadest contact that is efficient should be used, because the force will be directed through a larger surface area. For example, a force applied by a fairly open palm against the skin is perceived by the patient far differently than a force applied by a pointed finger against the skin. Thus, a palm-heel, thenar or knife-edge (medial edge of the hand) contact produces less patient discomfort than a pisiform or thumb contact. There are times, however, when a pisiform or thumb contract on a spinous process is necessary to get the job done quickly and efficiently.

Contact Points and Their Options

All contact points are optional at some time. For example, if the site of contact is to be on a thoracic transverse process, the use of a pisiform, thenar, palm-heel or thumb contact could all meet the same objective, essentially depending on doctor-patient positions, the segmental position of fixation, and degree of associated spasticity. Thus, the choice of selecting a transverse process, a spinous process or a lamina contact is a matter of clinical judgment. A mobilizing force directed against any of these structures will induce articular separation, tissue stretching, and the effected segmental motion, although one contact may be more efficient and less painful to the patient than another, depending on the situation at hand.

Most classic adjustive technics apply contact on the spinous process or transverse process for greater leverage. Whenever possible, a laminal contact would allow the force to be directed against the strongest aspect of the posterior portion of the vertebra. Some leverage is lost with a laminal contact, but added safety is gained. Unless cautiously applied, a transverse process contact holds the inherent danger of the contact slipping laterally, which can easily result in rib injury. A transverse or laminal contact is less painful to the patient than a spinous contact because of the padding afforded by the intervening soft tissues. A broad contact (e.g., knife-edge, heel of hand) although less specific, is less painful to the patient than a contact applied with a smaller surface area (e.g., thumb, pisiform or adjusting gun).

Securing the Contact Hand

Precautions should always be taken when applying an adjustment to avoid slipping and pounding, as both can bruise the patient, induce unnecessary pain, and result in an inefficient correction attempt. The patient's skin should be drawn taut in the direction of drive. Slipping results from not having the contact point properly anchored or perspiration from the patient's skin has not been removed. Pounding is generally produced by making an adjustment when the contact is lifted from the patient's skin just before applying the adjustive force or delivering a recoil adjustment when the elbows are not completely relaxed.

Direction of Drive

Once articular motion restrictions have been found, the joint is usually adjusted with the force directed into the restriction. This is best achieved in most situations by adjusting with the contact on the opposite side of the fixation because more motion with less force can be accomplished by using a long-lever arm. In any joint exhibiting fixation, it is often necessary to adjust in more than one direction if more than one plane of motion is restricted.

Proper stance allows the line of drive to be delivered in the most efficient direction. The direction of drive should be against (through) the fixation, in the direction of blocked mobility, and in line with the articular plane. As in any generality, there are a few exceptions to this rule, but space does not allow their explanation here.

The basic principle here is that movement of the segment being adjusted is determined by the direction of drive and the plane of articulation. To have a better understanding of this, let us take, as an example, a typical midthoracic vertebra where the apophyseal joints have a plane of articulation almost at a 45 degree angle. A P-A force directed against both transverse processes will move the segment anteriorly and superiorly. A P-A force directed against the right transverse process will rotate the vertebra in a counterclockwise direction (anterosuperiorly on the right, posteroinferiorly on the left). A P-A force applied against the left transverse process will rotate the segment in a clockwise direction (anterosuperiorly on the left, posteroinferiorly on the right). If the contact is taken on the left side of the spinous process and a force is delivered toward 2 o'clock, the vertebra will rotate in a counterclockwise direction, and vice versa if the contact is applied against the contralateral side of the spinous process.

A spinous process contact applied in the midline or a double transverse contact will flex the vertebra if a P-A force is delivered and the subjacent segment is stabilized. However, if the superior segment is stabilized and the inferior segment is forced to extend, the same intersegmental motion is achieved. Once the mechanical principles behind this concept are grasped, there need be little argument in the effectiveness of one technic over another. Likewise, a P-A thrust against a right transverse process or a thrust against the left side of the spinous process will both rotate the vertebra in a counterclockwise direction. The choice of contact is solely a matter of clinical judgment and personal preference. The direction of drive, however, is not optional if the best mechanical advantage is to be assured. The direction of drive is determined by the site of fixation and the plane of articulation.

Depth of drive is another important consideration at this time. This topic was briefly described in a previous column.

Richard C. Schafer, D.C., F.I.C.C.
Oklahoma City, Oklahoma

Editor's Note:

This series of articles has been adapted from Chapter 15 of Dr. Schafer's book on Clinical Chiropractic, The Management of Pain and Disability -- Upper Body Complaints, which is now available. Please see the Preferred Reading and Viewing list on Pages xx, Part #T125 to order your copy.

MAY 1991