Clinical Orthopedic Neck Massage

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INTRODUCTION

The human neck is a marvel of biomechanical engineering. Through a precise functional interplay of cervical vertebrae and their associated soft tissues, the neck functions to orient the head in whatever positions are needed to interface with the world. However, the postures we assume in our lives often place great stress on the musculature of the neck, especially the posterior extensor musculature. Therefore, clinically oriented orthopedic massage is often indicated and necessary. One aspect of clinical orthopedic massage therapy is deep tissue work.

Although deep pressure is not always indicated as the optimal treatment technique or even desired by the client, when it is the appropriate treatment choice it is critically important that it is performed safely for the client and with the least effort by the therapist. This article explores techniques to work the neck with deep pressure when the client is in the prone, supine, and side-lying positions. It also explores the underlying body mechanics that are needed to efficiently perform these techniques.

FUNDAMENTAL BODY MECHANICS

Before presenting specific techniques for each position, let's discuss a few fundamentals of body mechanics for creating and delivering pressure. These fundamentals are using body weight and working from the core, keeping joints stacked, and directing pressure perpendicular to the contour being worked.

BODY WEIGHT AND WORKING FROM THE CORE

Pressure generated into the client can come from two sources: body weight and muscle contraction. Of these two, body weight is free in that it takes no physical energy expenditure on the part of the therapist, therefore it should be utilized whenever possible. But using body weight does require that the table is low enough so that the therapist's core can be positioned over the area of the client's body that is being worked. The proper table height for this varies depending on the size of the client, the positioning of the client, the part of the client's body that is being worked, and the part of the therapist's body that is being using to contact the client. As a general rule, if the therapist is contacting the client with the pads of the thumbs or other fingers, or even the palms, the top of the table should be no higher than the therapist's patella. However, if the therapist is using the elbow or forearm as the contact, the table can be higher and should be positioned so that the top of the table is approximately at the mid-thigh of the therapist.

When body weight cannot be used, or it needs to be supplemented, the therapist needs to generate force with muscular contraction. To minimize effort, fatigue and injury on the part of the therapist, it is always best to generate this force using the largest muscles possible. This usually means generating force from the core musculature of the body and/or generating force from large musculature of the lower extremities that is then transferred through the core of the body. In either case, it is essential that the therapist work from the core.

Given that the therapist ultimately uses some part of the upper extremities to contact the client, it means that the therapist needs to orient their upper extremities close to and in front of their core. In effect, the therapist needs to work from inside out. This is accomplished by keeping the elbows in toward the midline as much as possible. A good way to visualize this is to think of placing the elbows inside of the anterior superior iliac spines (ASISs). For therapists with a lot of soft tissue in front (large-breasted therapists or therapists with large abdomens), it may not be possible to perfectly attain this posture, but the closer the elbows can be brought in, the better.

Electric Lift Tables

The optimal height of the table can vary during the same session for many reasons. Therefore, having a table whose height is easily adjustable is critically important. Although at first many therapists view an electric lift table as extravagant, it is likely one of the best investments that a therapist can make, both in their business from increased revenue from satisfied clients, and in the longevity of their career by remaining injury-free.

Stacked Joints

Another fundamental of body mechanics is that forces should be directed in a straight line. This means that joints should be stacked, in other words extended as much as possible. This is important to generate maximum pressure into the client. For example, when working with flexed elbow joints, leaning in often results in loss of force because we further flex, in other words collapse at the elbow joints instead of pressing into the client. Working with stacked joints is also important to prevent injury to the joints through which the force is being transmitted. Transmitting force through a bent joint places a tremendous torque force into it. This is especially prevalent for wrists and thumbs, and often the cause of

injuries that drive massage therapists out of business.

Working Perpendicular to the Contour of the Client's Body

Maximal pressure for the effort expended occurs when pressure is exerted perpendicular to the contour of the body part being worked. Given the curvature of the neck it is important to pay attention to this and adjust from the lower to the upper cervical region.

WORKING THE NECK

Although massage is beneficial to all muscles, certain musculature, given its layers and depth, require more attention and deeper work. In the neck, this is true of the laminar groove musculature located over the vertebral laminae between the spinous processes and articular processes (facets). This is where much of the muscular tightness that clients experience in their neck occurs.

PRONE POSITION

Because the client's scapular and upper back regions are worked with the client prone, it seems a natural extension to continue working into the neck with the client positioned this way. One advantage to neck work in the prone position is that it allows the therapist to use body weight to create pressure. The downside to prone neck work is that if the therapist is not careful with the angle that the force is directed, the client's face can be uncomfortably pushed down into the face cradle. For this reason, the key to prone neck work is adjusting the angle of pressure from the lower neck to the suboccipital region. In the lower neck, pressure can be directed anteriorly, down toward the floor. However, as the stroke progresses up the neck, it is important to gradually transition the direction of the stroke to be more cephalad (superior). By the time we reach the suboccipital region we should be pressing nearly directly cephalad (Figure 1). In effect, the stroke is a scooping motion that matches the lordotic curve of the neck. Whenever possible, it is important to work with the hands in concert. In this case the thumb of the contact hand is braced (double supported) by the other thumb.

If the base of the neck (top of the trunk) is worked, then the therapist should instead stand toward the head of the table so that the base of the neck can be approached at a perpendicular angle. Strokes should be short, ranging from 2.5 to 10 centimetres in length.

Another stroke that can be performed in the prone position is cross-fibre stripping to the laminar groove musculature. This is accomplished by standing to the side of the client, curling the finger pads of the index, middle, ring, and little fingers to hook around the laminar groove

Caution: Avoid the transverse processes!

The techniques shown here involve deep tissue massage to the posterior laminar groove musculature. When working this musculature, it is extremely important not to veer too far anteriorly and press too deeply over the transverse processes. They are sharp and pointy. Deep pressure here is not only unnecessary, it would also be very uncomfortable for the client.

SUPINE POSITION

Massaging the neck with the client supine is usually done with the therapist seated. Because maximal pressure is exerted by pressing perpendicular to the contour of the area being treated, it is important when working the neck for the therapist to change the location of the seated position. When working the base of the neck the therapist is seated at the head of the table, toward the centre. However, as the work is done progressively higher up the neck, the therapist needs to move the stool around the side of the table. By the time the therapist reaches the suboccipital region, they will be seated 90 degrees or more around the side of the table (Figure 3). Because the optimal position from which to work changes, strokes should be short, ranging from approximately 3-6 centimetres. Work further up the neck is performed from the next seated position.

Because force is transmitted horizontally into the client, the supine position does not allow for body weight to be used as the prone position does. However it is still possible to use large musculature and work from the core. To do this the therapist needs to bring the elbow in and tucked as close as possible inside the ASIS. By doing this, when the therapist rocks forward with the pelvis, the force of the core moving forward transfers directly through the elbow, forearm and hand, and into the client (Figure 4). The most common error made is that instead of keeping the spine vertical as the pelvis rocks forward, the therapist collapses downward toward the client; this causes the elbow joint to further bend. To make sure that the core force is correctly and fully transferred into the client, make sure that the angle of the elbow joint does not change. For each degree that the elbow joint bends, a corresponding amount of core force is lost.

An advantage to the supine position is that the therapist's other hand can be effectively used to supplement the work, both by increasing the depth of work or by positioning the client's neck to be worked on stretch.

To increase pressure the therapist gently, but firmly and securely, supports and cradles the client's head in their