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WORKING WITH THE HEAD & NECK

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MANUAL THERAPY SAFETY IN THE HEAD AND NECK: A PERSON CENTERED GUIDE

By Walt Fritz, PT

From within the ranks of manual therapists, each profession teaches the need for safety and caution while working within the head and neck region. However, it's doubtful that a universal list exists to inform us. Though my concerns often differ from others, which will be explained later, we need a basic framework from which to work. This framework should guide us to be aware of medical and psychosocial concerns.

Any safety discussion when working in the head and neck field is nuanced. There are strict red flag-type concerns where there is no working around these issues, yellow flag topics that call for our awareness, and fuzziest topics that vary in importance based on the training one received. As I teach to live audiences, primarily speech-language pathologists, massage therapists, and physiotherapists with a particular interest in voice and swallowing concerns, I observe the wide range of problems held not only by any one profession but also among subgroups within those professions. A physiotherapist trained in spinal manipulation may display different

awareness and apprehensions about, for instance, vertebral artery anatomy than a massage therapist, who might have more significant concerns for the carotid arteries, given their proximity to the perceived therapeutic targets. A clinician with specific training in orofacial myofunctional work sees issues relating to problems and safety differently than many of my other learners.

The purpose of this short paper is not to provide an all-inclusive guide to safety when using manual therapy (MT), as such a comprehensive topic is beyond the reach of this article. Instead, my goal is to sample safety from the obvious (avoiding arterial dissection) to those less apparent (elevating patient input). My bias is plain; I see our work stemming too much from the clinician's ego and insufficiently allowing shared decision-making (SDM).

Intake information

As I cannot make assumptions about the availability of medical history on any new patient, I will assign this duty to you. No matter your setting or the type of MT services you will provide, you have an ethical obligation to obtain a good history (medical, social)

to create a therapeutic contract with each person seeking your care. Before any initial evaluation visit, I request that new patients complete a history form. This form has evolved over my decades in private practice to collect the data I need to begin working with a new person. Realistically, the provided history begins a conversation, as no history form can give you all you need, nor will it fit the individual narratives of every patient. In my home state of New York, USA, I am allowed to treat a new patient for 30-days or ten visits without receiving a referral (prescription) from a physician. While direct access will enable us to begin work immediately, without a gatekeeper, the risk increases of your patient not being properly and thoroughly screened for contraindications or concerns. In professions where a patient need never see their physician before receiving care, the provider should see this as a risk factor and refer them to their primary caregiver (or specialist) whenever potential red flags arise.

When working in the head and neck, concerns may include:

- History of trauma to cervical spine/cervical vessels
- History of migraine-type

- Headache
- Hypertension
- Hypercholesterolemia/hyperlipidemia
- Cardiac disease, vascular disease, previous cerebrovascular accident, or transient ischemic attack
- Diabetes mellitus
- Blood clotting disorders/alterations in blood properties (e.g., hyperhomocysteinemia)
- Anticoagulant therapy
- Long-term use of steroids
- History of smoking
- Recent infection
- Immediately post-partum
- Trivial head or neck trauma
- Absence of a plausible mechanical explanation for the patient's symptoms
- Recent surgery

When faced with a diagnosis or condition with which you are unfamiliar, ask questions. Contact their physician if your training did not prepare you to adequately judge the safety of using manual therapy

with the patient. Every clinician may have specific concerns unique to a patient population. However, care should be taken to look beyond one's area of training for general relatable contraindications. This warning intends that, in my experience and observations, many lines of manual therapy training tend to underplay health and safety concerns as an assurance of the safety of that intervention style.

Pouring through massage-related posts by educators on social media reveals a near-unanimous warning to avoid the "danger triangles" of the neck, both anterior and posterior. As I teach my work to others, I'm often confronted with these concerns and will frequently ask the questioner why these warnings are made. Responses are obvious. "To avoid harm," which is a reasonable response. But is manual therapy and massage in these areas always risky? Does it always harm? Are there risks worth taking if the rewards are warranted? Mightn't those blanket warnings be made to prevent those with little training from unfettered access to potentially risky areas? In this summary article, I hope to discuss some of those risks and ways to diminish them.

Everything we do with a patient involves risks. Walking into the treatment room without doing anything poses risks, be it real or imagined. Our task should be to minimize risk and maximize benefit.

Blood vessels, nerves, and other potentially risky structures

Chakrapani et al. (2009) report on a case of stenotic dissection of the bilateral internal carotid and vertebral arteries during a fascial massage. The therapist passively moved the patient's head and neck in a manner that caused immediate neck pain that subsided within a few days. But over the next 13 days, they experienced various neurological issues, with the diagnosis confirmed by MRI. Grant et al. (2004) report on an incidence of self-induced carotid artery dissection (CAD) after using a handheld massager. Though possibly seeming irrelevant to this audience, "(t)he extracranial internal carotid artery (ICA) is susceptible to injury and dissection from external shear forces applied to the neck. Traumatic ICA dissection usually occurs in the setting of a sudden, high amplitude force causing significant distortion of surrounding soft tissues. Weaker, repetitive forces applied for longer



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intervals may also pose a risk for ICA dissection” (Grant, 2004, pg. 1).

CAD, while not common, is not rare. Gabriel et al. (2019) report on a session of the popular exercise routine, CrossFit, being sufficient to cause such an episode. Haldeman et al. (1999) discuss similar events after cervical manipulation, with the rate of occurrence of vertebral artery dissection six times greater than normal (spontaneous) occurrence (Vascular Pathologies of the Neck, ND). While massage and manual therapists who do not use cervical spinal manipulation as a part of their interventions may feel these risks don't apply, when viewed from the context of Chakrapani et al. (2009), there is still a risk.

As pointed out (Vascular Pathologies of the Neck, ND), there is a need to be aware of the clinical manifestation of CAD, as a frequent presentation is head and neck pain. Head and neck pain is often the specific referring diagnosis to the manual and massage therapist but may benefit from more comprehensive evaluation by a physician due to underlying CAD. The reader is encouraged to read the many articles mentioned here and those linked from those references

for greater detail on arterial-related material, including risk factors and the relative rarity of vertebral artery dissection compared to CAD. As a delay of many days from the incident of injury to the onset of symptoms is common with cervical arterial dissection (Blioussé, 1995), making in-the-moment concerns evident, further care must be observed. The curious reader will find numerous related citations of injury and damage to the carotid artery and associated structures (nerves, other blood vessels, muscles, lymph ducts) in the neck region by searching the various available databases. More general pediatric concerns are addressed by Karkhaneh et al. (2019).

Posadzki and Ernst (2013) performed a systematic review of available literature from 2001 to 2021 and reported on reported adverse effects (AE) of massage therapy treatment. Such events included bladder rupture, cervical lymphocele, cervical cord injury, bilateral cerebral infarction, interosseous nerve palsy, focal motor seizures, and more. The authors concluded that “this therapy is by no means entirely free of risks (Posadzki and Ernst, 2013, p. 31).

Ernst (2003, p. 1105) reports direct

injury to a nerve/nerve root during a vigorous Shiatsu massage to the neck, requiring hospitalization due to pericardial and lower neck region pain. Though possibly troubling to many in our shared fields, both the Ernst (2003) paper and the one by Posadzki and Ernst (2013) should be mandatory reading. To ignore the AEs mentioned above is ignorant. While not common, they do occur. While due caution applied to areas of potentially fragile anatomical structures should logically reduce risks, such actions are not well-represented in the current literature.

How does knowing the potential risks help us to assure increased safety? Through a reading of the articles mentioned here (and additional articles contained in the references cited, these are indicated with *** in the reference list), you, the clinician can lay out specific pre-existing conditions for further exploration and discussion and consider either reducing the aggressiveness of the intended treatment methods or forgo treatment until an open communication is had with the patient and their medical providers better to gauge the risk/rewards of proposed interventions.

Communication concerns

Are the abovementioned concerns and evidence of the reported incidents sufficient to cause the clinician to avoid this body region altogether? The answer for most is no, but understanding the physical risks mentioned above is only one part of a more extensive process of clinical awareness. We need to establish additional methods to lessen risk. Performing a comprehensive intake is necessary, as are asking questions that may seem out of the norm for our professions.

Having spent years in this field, learning from a range of educators and models, I've formed an opinion that a critical aspect of patient safety assurance is lacking. Reduction in self-determined risk can be reduced by greater inclusion of patient input via shared decision-making (SDM) into the treatment process (Moore & Kaplan, 2018).

Manual therapy tends to be led by a clinician-as-expert model, wherein the therapist is viewed as the holder of knowledge. Jacobs and Silvernail (2011, p. 2) describe this model as one dominated by the operator, where the “patient is the recipient of the manual act. They contrast this model with one that may be more desirable, an interactor model, where the patient and clinician have an equal stake in the interaction. They refer to the possibility of improved clinical outcomes and see this revised model as more congruent with emerged views of “scientifically congruent with the emerging explanatory model of the multifactorial, biopsychosocial pain experience, the neuromatrix” (Jacobs & Silvernail, 2011, pg. 2). With Diane Jacobs as one of my mentors, who aided me through my transition away from the singular, tissue-based viewpoints of my early training, I began to learn more about SDM and its implications for improving patient safety.

While SDM holds much more promise for improving therapeutic outcomes and enhancing buy-in from the patient (McCormack & Corner, 2003; Moore & Kaplan, 2003; Tousignant-Lafamme et al., 2017), I saw additional aspects of SDM that are seldom mentioned in manual

therapy explanatory frameworks. As the expert, the clinician in a manual therapy setting is typically handed the role of decision-making; they evaluate to determine the problem and usually make suggestions for treatment to remediate it. In our frequently segregated worlds of multiple modality training, issues are often defined based on the teachings of that modality, as are remedies. A myofascial release-trained therapist will determine dysfunction based on that myofascial release (MFR) models and recommend intervention based on those same principles. These explanations are often stated or implied as factual, despite the literature devoid of such conclusions (Remvig et al., 2008). Patients, knowing little about that narrative, frequently defer to the expert's knowledge, though they may understand little of the languages being spoken or concepts being presented. Though some may disagree, I see this as the norm in our shared professions. Patient input is requested, but it is often superficial. “How's the pressure?” forms an example of the extent of input sought, with “I'm fine with it” or “I can take it” as a patient's typical response. By deferring to the clinician's expertise, I see a potential for increased risk within the therapeutic relationship. The patient's trust in the clinician's knowledge may be so great that they limit their questions or fears about the procedure's safety, creating an atmosphere where the intervention is performed with unclear boundaries. For example, if a patient was sent to a therapist who, unbeknownst to them, practices a manner of bodywork using assertively deep and aggressive pressures. But this therapist was recommended by a trusted friend or doctor who said they've heard great things about that therapist's outcomes. Lacking a deep understanding of the multifactorial nature of how manual therapy works (Bialosky et al., 2018), they assume that their problem must be met with aggressive forces for them to be helped. As a result, the patient accepts a level of pressure that induces fear of injury or harm, simply out of trust in the person and the process. In most cases, such interactions do not harm and may

even help, but when working in an area of the body (the head and neck) where injury can create actual harm, such disparities in power are unwarranted.

Much of the last decade has been spent understanding how these disparities can be diminished. I've examined typical clinical encounters from various modalities models and concluded that we could do better. Power disparity is tacitly encouraged by tiered levels of training, where we learn more to become more of an expert. With the feeling of expertise should come improved clinical outcomes, though little evidence exists to confirm that logical assumption. With that perception of expertise comes a sense of knowing, knowing what others don't, knowing what problem exists (often based on the modality-of-origin), and knowing what needs to be done to remediate the condition. Such power reinforces Jacobs and Silvernail's (2011) views of the operator in action. Power is seldom equal in health and medical-related settings (Anderson, 2001), though “(b) addressing and minimizing the power differential, therapists can provide clients with opportunities to ask questions, seek information, and make decisions through informed choices” (Bainbridge & Harris, 2006, pg. 78).

Improving safety while working in the head and neck region (or any area) via SDM requires clinician behavior and perspective changes. We are experts in our respective fields, but not over our patients and their lived experiences. Acknowledging our limited understanding of another individual's lived experience is vital. While patients often expect us to determine the problem and make recommendations for solutions, I temper this tendency by stating, “I know a lot, but I don't know what you are feeling, fearing, or expecting until you share that with me. I need your input to help you.” I see the ideal clinical encounter as one of mutual power. I share my observations and opinions but ask for and expect input from my patient. That input may contradict my findings and lead us down an unexpected path. (I found something, but what do you feel?)

Without complete patient input, we risk working from our agenda instead of theirs. What we feel is relevant may be meaningless to them, though they often allow themselves to be talked into our views (or talk themselves into them). Frequent clinician-based conversations on social media are stories about patients feeling their issue lies in one body part, while the clinician's training, experience, and intuition tell them the problem is elsewhere. An oft-repeated mantra from my original MFR training community frequently stated, "find the pain, look elsewhere for the cause." There are a few problems with that narrative. First, the "cause" tends to be stated in terms of the modality (fascial problems, in the case of MFR), with little understanding of the

complexities of causation (Mumford & Anjum, 2013). Declarations of the issues being elsewhere were often stated from unproven narratives but universally accepted within a single group of clinicians based on their training. More importantly, by negating the patient's views, we've diminished their self of knowledge as reliable and inflated our perspectives. Is there risk here? I believe so. Minimizing patient perceptions of their self-awareness runs the risk of having them begin to negate any internally generated opinions, including those relating to pressures, pain, etc. What are the dangers of ignoring patient inclusion? Pain felt by the patient may not be reported or minimized ("I can take it"), increasing the possibility of harm. These patient experiences

should be elevated, not squashed.

Summary

As you explore the topics covered throughout this issue, I urge you to continually assess your biases about what you've been taught in your education and continuing education and experiences from your clinical encounters. Pursue new knowledge but remember that adverse reactions can and do occur. However, risks can be lessened with a deeper understanding of risk factors and red flags and by improving the allowance of patient input via SDM.

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AUTHOR BIO

Since beginning work as a manual therapy educator in the mid-1990s, US-based physical therapist Walt Fritz has more recently evolved into teaching a unique interpretation of manual therapy for speech-language

pathologists, registered dental hygienists, voice professionals, and related communities. His approach advances views of causation and impact from historical tissue-specific models into a multifactorial narrative, leaning heavily on biopsychosocial influences. His principles apply to a broad spectrum of intervention models using a model of evaluation and intervention that incorporates shared decision-making rather than clinician-as-expert. Unlike traditional laryngeal and soft tissue manipulation, Walt offers the clinician and patient a more subtle approach, one often much better tolerated, aligning well with newer research findings, and allowing the patient to

frame the intervention from their preferences and values. Seeing the utility of manual therapy not as a standalone treatment but as an integral part of clinicians' more extensive body of work, Walt makes his approach easily assimilated into those treatment protocols.

Walt presents his workshops internationally through his Foundations in Manual Therapy Seminars, www.WaltFritz.com, offers online courses, has a book scheduled for release in late 2022 titled "Manual Therapy in Voice and Swallowing: A Person-Centered Approach," and maintains a physical therapy practice in Upstate, NY, USA.



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