

Massage Therapy Today

Putting Knowledge into Practice

FOCUS: HEAD AND NECK

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MESSAGE FROM THE EDITOR

A Look at Head and Neck Treatment

When people think about massage therapy, they don't necessarily realize the benefits massage therapy can have for conditions that impact the head and neck, such as headaches or migraines, persistent symptoms after a concussion, whiplash, neck pain, or temporomandibular joint disorders (TMJDs).

Simply put, massage therapy can help people with these conditions find some pain relief. This issue of *Massage Therapy Today* was designed to remind readers of key considerations when treating people with conditions impacting the head and neck. The articles in this issue include assessment and treatment suggestions and introduce the latest evidence that supports the use of massage therapy for these conditions.

Most of us have experienced a headache at some point in our lives. Migraines are fairly common, with estimates that nearly 15% of the population experiences them. In his article, David Zulak provides an overview of gentle techniques that can help people with tension headaches and migraines decrease their pain.

Headaches are also a common symptom that can persist after a concussion, which can be triggered by soft tissue irritation and subsequent nerve sensitization. Richard Lebert goes over the assessment and treatment of post-concussion headaches so that RMTs can feel more confident treating this patient population.

In addition, since the beginning of the COVID-19 pandemic there has been a noticeable increase in people with TMJDs, and people who have previously had TMJDs have seen worsening of their symptoms. Jeri Roberts suggests that this may be because of an increase in daytime clenching as a result of stress and anxiety, and she provides a list of things RMTs should consider when offering treatment.

There are many different neck muscles, just as there are many different reasons someone might experience neck pain. If there is damage to one of these neck muscles, it can cause a variety of other symptoms and discomforts. For instance, in her article, Anne Käärid explores dysfunction of the sternocleidomastoid (SCM) muscle in relation to sore throat, runny eyes, and postnasal drip.

Highlights of existing evidence that demonstrates the benefits of massage therapy in this area are presented by Jules Poulin. She also covers the potential impact this evidence might have on massage therapy practice.

Read on to explore a variety of things RMTs should consider when a patient comes into their practice with head, neck, or jaw pain.

There are so many ways massage therapy can benefit these individuals, and we hope this focus on the neck up will be an enlightening refresher for you, as well as a source of new information that will help improve your practice.

Laura Fixman,
Manager of Communications

Exploring the Sternocleidomastoid Muscle in Relation to Sore Throat, Runny Eyes, and Postnasal Drip

By Anne Käärid,
RMT, NHP



Anne Käärid, RMT, NHP, has worked as a therapist since 2008, bringing her experience of Eastern and Western manual therapies to her clients in the quaint town of Almonte, Ontario. Anne is also an educator and developer of lunchbox-u.com, a micro-educational platform to support massage therapists' skills and expertise. www.annethermt.com.

Headlines warning of new COVID-19 variants and the onslaught of viruses that usually cause cold-like symptoms have made many of us hyperaware of the germs that make us sick. But how often are we considering that some of these “symptoms” may stem from tight muscles—and not a long-lasting virus at all?

In this article, I will explore the dysfunction of the sternocleidomastoid (SCM) muscle. As RMTs, we are aware that imbalance in this structure can result in head and face pain, nausea, and dizziness—but it may also cause coryza, lacrimation, and even muscle tension dysphagia. I would like to share with you an experience I had with a patient that experienced imbalance in this often-overlooked area, and how trigger points and SCM dysfunction came into play in his presentation and restoration.

Case study

The patient presented with complaints of posterior shoulder and lateral neck pain. He expressed that this was his “normal” because of his job (computer work and driving) and because he played hard at seasonal golf and hockey. Through our intake and assessments, he shared that he experienced occasional facial numbness and tingling over his right forehead, ear, and cheek, which sometimes caused his eyelid to twitch excessively and produce a flow of tears. Exploring this further, he shared that he had been to several doctors over the past 16 months because of chronic pain in his throat. His pain was about

8 on the pain scale at its worst and remained around a 3 day-to-day. He had been concerned about cancer, but all tests by his physician (such as swabs, bloodwork, and a physical exam) and imaging done to that point had shown everything to be normal. He was scheduled for an MRI a few months down the road. He had no previous history of accidents or blunt force trauma that could be linked with the onset of these symptoms.

Assessments

During posture analysis, I observed decreased cervical lordosis, forward head posture, and bilateral internal rotation of his shoulders. It was evident that he had biomechanically flawed posture when testing range of motion (ROM): his cervical ROM was slightly compensated in rotation and flexion with some discomfort in rotation and extension. Other ROM, myotome, and dermatome tests all fell into the normal range. The patient also exhibited faulty breathing patterns by overuse of the scalene group and SCM muscles. Proprioceptive testing indicated some challenges in his sense of balance. Orthopedic tests showed weakness in deep neck flexors and the lower and middle trapezius muscles.

Deep tissue palpation revealed the presence of the following:

Multiple trigger points in the upper trapezius and levator scapulae muscles bilaterally, referring pain to the suboccipital area. Two bundles of trigger points in the right clavicular head of the SCM, referring pain to the cheek

and sinus areas and recreating significant pain in the throat, especially when swallowing.

My findings showed that the patient had developed multiple postural compensations, including altered neck flexion due to tightness in the SCM, scalenes, upper trapezius, and levator scapulae. After this series of assessments, my patient shared with me how surprised he was that so much of his pain could be recreated by such a small area of his neck. But he was excited to shed some light on the situation, and was open to trying treatment for this sensitive area.

Treatment

The goals of treatment were to relax and elongate the shortened muscles, to strengthen the weak muscles, and re-educate the patient on breathing patterns through diaphragmatic breathing. Shallow or inefficient breathing negatively impacts the proper movement of the sternum, clavicles, ribs, and diaphragm, and this is important in relation to the SCM and scalenes. As we know, the SCM attaches to the sternum, and the scalenes attach to the first and second ribs and act as accessory muscles to inhalation. Diaphragmatic breathing inhibits the involvement of overactive accessory muscles by keeping their activity to a minimum and allowing free and proper movement of the muscles of respiration, sternum, clavicle, ribs, and diaphragm. These multiple goals were incorporated into a treatment plan that included a series of passive and active treatments targeting not only the SCM and scalenes, but also a hypertonic masseter and temporalis, where latent trigger points were found that referred pain into the cheek and upper teeth. Treatment included a varied approach of manual soft tissue techniques, post isometric relaxation (PIR), and intentional breathwork. The work on the SCM



was slow and intentional, and it produced a lot of coughing from the patient, so I kept a glass of water on hand for him. Communication between us was key to gauge where he was on the pain scale and ensure that the treatment was not causing nausea. I focused on the tone of the trigger points to make sure the bundle did not tighten back up under my fingers and reverse the work we had done. Of course, the areas were well flushed with gentle and directional effleurage to encourage the muscle fibers to return to their healthy state. Slow ROM stretching of the SCM was an essential part

of each treatment, along with guided breathwork and the application of heat to the area. My patient appreciated this after a hard “work-out” on his neck.

Conclusion

The patient was instructed on some general at-home care and remedial exercises, and he was

advised to continue with a regular breathwork practice. I encouraged him to keep me updated on any reactions to treatment, especially in the beginning stages of the plan. We also discussed reaching out to other allied health practitioners (i.e., an osteopath, postural therapist, physical therapist, or personal trainer) to include them in his circle of care to further his recovery. He was very open and grateful for this suggestion and took the journey to healing seriously. He began to see a personal trainer and an osteopath to prevent further aggravation of the region. My patient was extremely happy to regain some control over his pain (through treatment, exercise, posture, and breathing exercises) and responded to treatment rather quickly. He maintains a regular schedule with massage and his osteopath and exercises and stretches regularly. He is thankful that he

“After this series of assessments my patient shared with me how surprised he was that so much of his pain could be recreated by such a small area of his neck.”

“But the awareness of these symptoms gives us some insight and indication to further investigate when assessing, treating, and discussing our patient’s treatment options.”

has not experienced any throat or swallowing pain, facial numbness, or eye twitching with lacrimation since.

Although the outcomes in this case were very successful, I need to be clear that no diagnosis was offered or implied when working with this patient. He understood the scope of the massage practice and what to expect of the treatment plan. However, he stated his appreciation for the time that I took to assess him and what those assessments revealed. Furthermore, he was grateful for the discussion of options for complementary treatments from other health care providers that could be helpful. Encouraging him to include other practitioners in his circle of care meant that the appropriate professionals were able to make diagnoses (within their scope of practice) and reveal the root of his issues. This resulted in a multi-faceted and collaborative treatment plan to bring his structures to balance and help him continue with healthy choices for his self-care.

This experience made me realize that the throat referral may be a commonly overlooked cause of chronic sore throat. The complaint often is of something stuck in the throat, or a feeling of fullness in the throat, especially when swallowing. It may be mistaken for pharyngitis. As we know, a common pain referral pattern of the SCM includes pain over the cheekbone, in the forehead, on top of the head, and in and behind the ear. However, it also can provoke pain or loss of sensation over the chin, over the sternoclavicular joint, and deep in the throat. When I further studied the clavicular division of the SCM, I learned that the forehead referral pattern is perhaps the only one that can cross the midline. Additionally, trigger points may cause symptoms of vertigo, syncope, nausea, ataxia, and dysmetria, and even disequilibrium symptoms. Of course, symptoms must be



differentially diagnosed by a physician, as this is out of our scope of practice. But awareness of these symptoms gives us some insight and indication to further investigate when assessing, treating, and discussing our patients’ treatment options.

As you probably already know, treating the trigger points in the SCM can be daunting, since so many underlying factors may be involved. When assessing the patient, I encourage you to look for joint dysfunction in the upper cervical spine, sternoclavicular joint, and the temporomandibular joint. Be sure to also consider the patient’s static posture and movement patterns, especially cervical flexion, swallowing, and sit-to-stand movement (for balance and upper body or cervical spine posture). These will provide important clues when forming your treatment plan. It is best that the patient is treated

in the supine position in order to ensure that the muscle will be completely relaxed. I found that ischemic compression, pin and stretch, and isometric relaxation are quite effective. Be sure to check in with your patient often during treatment and be prepared for some possibly profound outcomes.

Unfortunately, the fact that my patient’s symptoms could be elicited from trigger points in the SCM was not diagnostically considered by any of the health care practitioners who previously examined him. The massage therapy approach, combined with appropriate collaborative care, proved to be a highly valuable asset in finding the correct treatment for him. This case testifies to the indispensable role massage therapists can play in collaborative multidisciplinary treatment plans, perhaps by offering not only a different approach, but also a constructive point of view. ■

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Treating Headaches and Migraines

By David Zulak,
MA, RMT



David Zulak, MA, RMT, has been a massage therapist since 1996 and a long-time member of the RMTAO. For many years he was a clinical assessment instructor at several massage therapy schools and since 1996 has taught continuing education courses across Canada. He has written over a dozen articles on assessment and is the author of *Clinical Assessment for Massage Therapy: A Practical Guide* (2018; Handspring Publishing). David lives and works in Paris, Ontario.

This article focuses on gentle methods of treating common headaches and migraines; specifically, using the side-lying position and using muscle energy techniques (METs). This approach focuses on the muscular and other soft tissues of the occipito-atlantal joints (OA joints), the atlanto-axial joint (AA joint) and C2-3 joints.

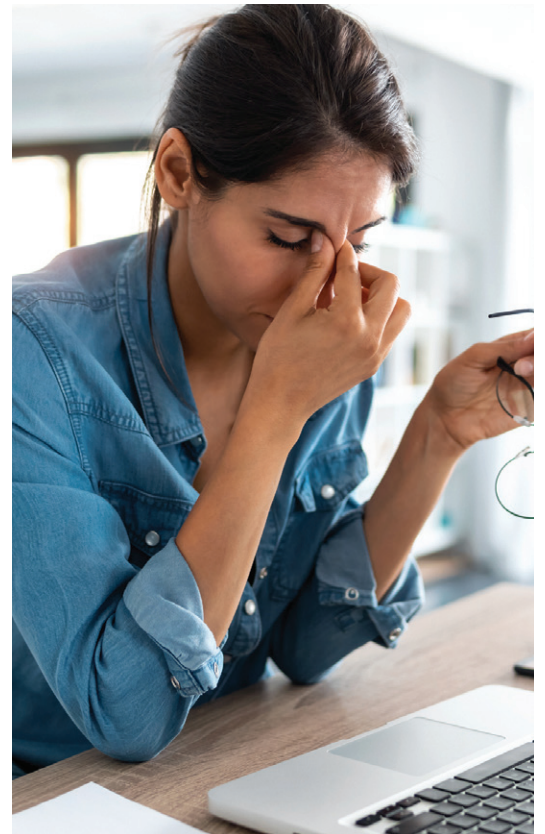
The sensory portions of the C1, C2, and C3 nerve roots have direct input into the trigeminal-cervical complex, which has been suspected to be the principal area where the referral of cervical structures and musculature into the head, face, and jaw takes place.^{1,2,3} The confluence of the trigeminal (plus facial) nerve and the accompanying sympathetic nervous system's innervation in the cranium, eye, ear, sinus, face, and jaw can be the source of many headaches and migraines and can be an amplifying component.^{4,5}

The suggestions in this article for positions and modalities give specific times and numbers of repetitions, but these are only meant to provide enough information for the reader to envision what is being described.

Side-lying

First, I would like to talk about a positioning of the patient that most massage therapists learn: side-lying, or the lateral recumbent position.

In this position, the therapist has access to the side of the neck as well as half of the posterior and anterior parts of the body. Further, while standing facing the back of the patient and cupping the



acromion, the therapist can traction and stretch (i.e., by depressing the shoulder) the musculature shared by the scapula (plus the clavicle), upper thoracic spine, cervical spine, and occiput. The stretching of these muscles (after initial preparatory massage done prone and side-lying) can be done very gently. The weight of the patient's head will modulate the amount of stretch. In other words, avoid using one hand to hold or stabilize the head while doing this, so that the amount of stretch is only what the musculature is willing to provide at the time.

Hold 10 to 15 seconds of stretch. Then, move the shoulder toward the head (i.e., elevate the shoulder), thereby shortening those tissues, and keep it there for 15 to 20 seconds. During this shoulder elevation, you can do several very slow, small rotations of the scapula and shoulder; these rotations move the shoulder first anteriorly into a circular movement, then reverse direction, moving it posteriorly and in a circular manner. Also, add glides to the scapula in rotation.

Have the patient try to give you enough feedback, so that if any movement is uncomfortable, you can stop and move on. Often, the patient will find this movement quite relieving. While I suggest a minimum of 3 or 4 sets of stretches and shortening of the tissues, you may wish to continue doing these for some time and may lengthen the duration of each in small increments, as long as the patient is comfortable with them, till you feel that the tissues have dropped any hypertonicity or restriction to motion.



Image 1



Image 2

Going slow doing this can yield surprisingly good results (images 1 and 2).

This side-lying positioning also affords the opportunity for some judicious use of kneading or gentle muscle stripping. Personally, I often do what I call “tracing anatomy”—going from origin to insertion of the muscles individually. This affords a chance to palpate each muscle for tone, texture, and tenderness. Also, with the shoulder elevated, the upper trapezius, levator scapulae, and rhomboids are all shortened and now allow a depth of work to these and deeper tissues (such as the splenii) without having to try to push your way in. This avoids the reflexive resistance and tightening that can occur with muscles when the elbows or thumbs are employed to force their way in.

Gentle tractioning/stretching and shortening. Note the use of a hand towel draped over the whole upper chest for appropriate draping and over the shoulder to allow the therapist to hold without slipping (images 1 and 2).

Having done the work described so far, you can sit behind the patient with one hand on the shoulder (holding the shoulder elevated) and the other gently, but specifically, addressing individual muscles. This also affords additional positioning; for example, to use strain-counterstrain (SCS) or positional release techniques on the levator scapula or upper trapezius.⁵

There are multiple variations of approach, types of massage, or other modalities that each therapist can bring to the table while using side-lying, making it very much their own.

Upper cervical spine focus

The modality, which has proven extremely beneficial in my sessions with patients suffering from cervicogenic headaches and from migraines, comes from the osteopathic tradition. Specifically, some METs for the upper cervical spine, as

“Often, the patient will find this movement quite relieving. Ask! While I suggest a minimum of 3 or 4 sets of stretches and shortening of the tissues, you may wish to continue doing these for some time.”

“During everyday neck movement, these suboccipital muscles are engaged prior to the larger cervical musculature, ensuring appropriate movements occur within the OA joints and AA joint.”

described by Fred Mitchell Jr., DO.⁶

This technique uses gentle active force generated by the patient. However, here the movement in the deep upper cervical spine musculature (“suboccipitals”) is provided by the patient’s eye movements via the “occulo-cervical reflex”—movement of the eyes through interconnected neurological pathways that activate those occipital recti muscles.⁷ During everyday neck movement, these suboccipital muscles are engaged prior to the larger cervical musculature, ensuring appropriate movements occur within the OA joints and AA joint.

The two METs shown in the images in this article employ, as occurs in almost all MET techniques, positioning of the joints at the end of their pain-free range of motion, the use of isometric contraction, relaxation augmented with reciprocal inhibition while “taking up the slack,” that is, taking the joints into whatever amount of ease of motion is gained to the new barrier of pain-free range of motion, and repetition of these steps three to five times.

I have found it best for the patient to have their eyes closed, as open-eye movements can be uncomfortable if the patient is experiencing a headache or migraine or feels one coming on. (The eyes of the patient in the photos are open to stress the direction of the eye movements.) Further, the therapist may wish to stand this way to more easily handle the weight of the head.



Image 3

MET for the OA joints

First, ask the patient to relax their head as you tuck in their chin for them. If you feel resistance, ask them to do it for you (within a pain-free range) and then relax.

Lift their head as you take the lower cervical spine into full flexion, doing so gently and slowly (you may sit or stand) till you reach the barrier of a firm stretch. This “locks” the joints of the lower cervical spine, focussing the activation to the upper cervicals.

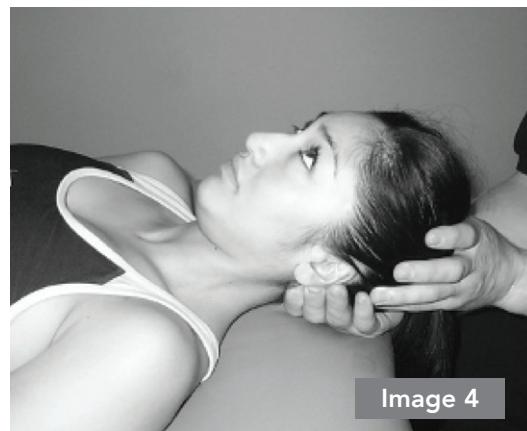


Image 4

Second, give instructions in advance: “I will ask you shortly to take in a long, slow, deep breath; keep your eyelids closed but using just your eyes (with no conscious attempt at neck or head movement) try to look up ‘hard’ into your eyebrows, all the while you are breathing in...to a count of 5. Then I will ask you to breathe out and look down to your chin, relaxing and just letting everything go...” Then take them through those steps.

Each time the patient looks up, resist extension at the OA joint.

When the patient breathes out and looks down, take up any slack—but only what the eye and breath give you! Do not push through or stretch! (see images 3-5)

Note: If you do not feel any slack occurring, add the following instruction: “and look down to your chin...very gently tuck your chin in; now relax as...completely as you can and just let everything go.” This activation of the deep anterior cervical recti muscles will increase the inhibition of the posterior muscles.



MET for the AA joint


To treat dysfunctions of the AA joint, i.e., the C1-C2 joint, which is restricted in rotation, the therapist can perform the following MET:

- 1) With one hand, have C1 or C2 in the web space between the thumb and index fingers and the occiput resting in the palm of that hand. Take the free hand and place it over the temporal bone area. Again, the patient's cervical spine is held in available full flexion to help prevent movement in the lower cervical spine.
- 2) Rotate the head till the restriction (barrier) is felt; this should be pain free for the patient.
- 3) Say that rotation is limited toward the left, and so the head is rotated as far to the left as is comfortable for the patient.
- 4) Place your right hand against the right side of the patient's head, with the focus of resisting movement to the right at and above the cheek bone, so as not to press against the jaw.
- 5) Instruct the patient to take a deep breath and hold, and then ask them, "look to the right." Count down and tell them, "5...4...3...2...1...now breathe out, look to the left, and relax completely..."
- 6) Immediately let the head move by itself, as it follows the movement of the eyes to the left.
- 7) Repeat three to five more times until rotation to the left is free and full.
- 8) Repeat with rotation to the right.

Hydrotherapy

I have found that the use of a cool gel pack (wrapped in a hand towel) placed at the back of the neck at the end of the treatment can help further relaxation and pain relief and may assist in calming the sympathetic nervous system. I always suggest that the patient do this again later in the day; especially if they notice any resurgence of their headache or migraine. Remind them that it is to feel cool, never cold. Use of heat, on the other hand, often makes some cervicogenic headaches and most migraines worse.

Summary

Many patients come to us for help in relieving headache pain by reducing intensity and recurrence. Side-lying, METs, and hydrotherapy are gentle, comfortable techniques that help our patients feel safe and cared for. 

“I always suggest that the patient do this again later in the day; especially if they notice any resurgence of their headache or migraine.”



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Massage, First Line Treatment for Temporomandibular Joint Dysfunction

By **Jeri Roberts, RMT**

Three years after the start of the pandemic, we are beginning to see that the ripple effects are far-reaching. Since COVID-19, dentists have seen an increase in clenching, grinding, and other temporomandibular joint dysfunction (TMJD) symptoms in their patients.¹ I've seen similar patterns in my practice, especially with daytime clenching triggered by stress and anxiety. This isn't surprising, since 54% of Canadians reported their mental health has worsened since the pandemic.²

With the rise of TMJD, massage therapists have an opportunity to become the first line of treatment for this condition. Massage therapy offers a non-invasive and non-pharmacological treatment option.

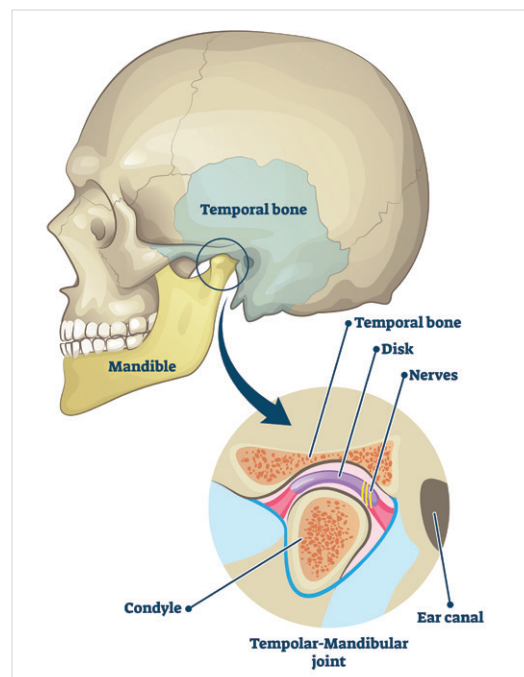


Jeri Roberts, RMT has been practicing for 14 years. Receiving advanced training and opening a TMJ Dysfunction (TMJD) specific clinic was driven from having this condition herself. She is the owner and operator of The TMJ Clinic located in Owen Sound. The clinic is focused on the treatment and rehabilitation of TMJD.

How massage therapy can help people with these disorders

When the TMJ and surrounding muscles experience trauma, degeneration, or excessive strain, they become dysfunctional.³ This can lead to disc displacement, soft-tissue tension, trigger points, and airway restriction.^{3,4} As a result, individuals with TMJD can experience jaw pain, headaches, reduced jaw opening, earaches, tooth pain, and more.³

Many take for granted eating without pain, being headache-free, and opening their mouth wide enough to brush their teeth. These are all challenges faced by those living with TMJD. I find massage therapy to be highly effective in alleviating these symptoms, because the TMJ is supported and surrounded by soft tissue. By releasing trigger points



and overworked muscles, as well as decompressing the joint, we can mitigate these challenges. This translates into improved quality of life for our patients, which is invaluable.

What techniques and approaches are most beneficial?

TMJD is complex. I recommend that intake and assessment be more comprehensive than a general health history. This will identify red flags and areas needing referral. It will also create a baseline to measure improvement and guide your treatment plan. Below are areas I cover in my initial assessments that you can add to your intake and assessment for TMJD patients.

Intake

Consider tailoring your intake form to be more TMJD-specific by gathering the following information:

- Presenting symptoms
- Oral habits (e.g., chewing gum/nails, resting chin on hand)⁵
- Injuries to the head, neck, and face⁶
- Dental history (long procedures, orthodontics, appliances)⁷
- Sleep (snoring, stopping breathing, dry mouth upon waking, position)⁸
- Stress level⁹
- Results of available imaging of TMJ¹⁰

Collecting this information can identify injuries, habits, and procedures that may be contributing to pain. It can also determine referrals that may be needed, such as a sleep study or myofunctional therapy.

Physical assessment

- Range of motion of the jaw and neck
- Palpation of the head, neck, and face, looking for areas of tenderness and trigger points
- Breathing pattern: Is it apical or diaphragmatic?
- Mandibular opening, looking for deviations or deflections¹¹
- Joint motion palpation: Palpate the TMJ while the patient opens and closes their mouth; feel for clicks and delays in movement¹²
- Tongue assessment: Where is their normal tongue position? Is it suctioned to the hard palate? Or is it resting on the floor of the mouth? (Low tongue posture can contribute to mouth breathing and grinding¹³)
- Swallowing (observe a patient swallow a few times; observe if facial and neck muscles are engaged when they should be at rest)¹⁴
- Posture assessment: Observe for forward head posture (FHP). This puts extra pressure on the TMJ by placing the condyles deeper into their sockets, which can become a source of pain. It can

also strain the neck and jaw muscles by changing their length-tension relationship.¹⁵ For instance, with FHP, extra tension is created in the muscles above the hyoid bone, and as a result, more force demands are placed on the jaw closers (e.g., masseter, temporalis). Over time this can produce trigger points causing muscle fatigue and pain.¹⁶ FHP can also be attributed to low tongue posture as a means to open the airway, which leads to thoracic kyphosis.¹⁷ This inhibits the diaphragm and abdominal muscles from fully contracting, reducing chest wall expansion, and weakens the respiratory muscles, which affects the quality of breath.¹⁸ So, as you can see, TMJD can extend beyond the face. Therefore, it is important to consider these related areas when conducting your physical assessment.

Massage treatments

The TMJs are unique. They are a pairing of two joints connected by one bone and operate as a unit. In essence, they cannot function independently.¹⁹ So, it's essential to address both sides in treatment. Often, the overworked muscles present with signs and symptoms first, but in fact, the opposite side is usually where the dysfunction lies.¹²

I've found the best results come from a combination of extra- and intraoral techniques paired with home care. Treating the external muscles and fascia of the head and neck brings significant relief. It's important to also massage the muscles inside, including the tongue and floor of the mouth. In my experience, these areas often need the most work. Incorporating intraoral techniques provide a thorough treatment to the whole mandibular sling.

The muscles in the mouth are often very tender, so I tend not to work intraorally for the first one to two treatments. I've found that addressing these muscles too soon can cause a lot of post-treatment discomfort. For some it can even create anxiety about working inside the mouth. Instead, I massage the external jaw muscles, neck, and shoulders. When treating intraorally be mind-

“TMJD is complex. I recommend that intake and assessment be more comprehensive than a general health history. This will identify red flags and areas needing referral.”



“I’ve found the best results come from a combination of extra- and intraoral techniques paired with home care. Treating the external muscles and fascia of the head and neck brings significant relief.”

ful of pressure and massage areas in short durations. This helps manage the patient’s pain level. Explain that some discomfort is expected, but it should always be tolerable. Using a pain scale for feedback is helpful.

Every patient is different, so there is no recipe for treatment frequency. However, I’ve discovered that in most cases weekly sessions have produced the best results. Occasionally, for more acute cases, I will suggest treatments twice a week initially before tapering off to weekly appointments. In my experience, weekly treatments can range from 6 to 12 weeks for symptom reduction. Once you’ve hit this benchmark, reassess and consider spacing the treatments out.

Home care

Home care is an essential part of the treatment plan. It aids in quicker recovery and alleviation of symptoms and can include rest, stretches, self-massage, hydrotherapy, strengthening, habit re-education, and stress management strategies.²⁰ It’s important to educate patients that their daily participation is necessary; after all, they will only be seeing you one hour out of 168 in a week. In my practice, I often recommend the following home care.

Proper jaw posture

Teaching proper jaw posture is beneficial for all jaw pain patients, but especially those that clench. Proper jaw posture is lips closed, teeth slightly apart, with the tongue resting

on the roof of the mouth (as if you were saying the letter “n”). This position provides rest to the TMJ, which helps aid in recovery and reduces pain.²¹ I have my patients bring themselves back to this position whenever they notice they’re clenching. Sometimes awareness is all that’s needed. However, if this position is difficult to maintain, a referral should be made to a myofunctional therapist.

Kick oral habits

Educate patients on oral habits that can place strain on the TMJ and surrounding muscles. These habits are listed below and can contribute to or increase their symptoms.²²

- Biting nails
- Resting the chin on a hand
- Opening packages with teeth
- Chewing gum
- Lip or cheek biting
- Eating ice

Tongue up exercise

This is an excellent exercise for patients with limited jaw opening. Place the tongue on the roof of the mouth. While keeping it in place, open the mouth to a comfortable maximum (no pain) and hold for 5 seconds. Then slowly close the mouth back to the starting position. Repeat 20 repetitions daily.²³

Referrals

Massage is only one piece of the puzzle when it comes to treating TMJD. I believe a multifaceted approach yields the best results for our patients. This may include collaborating with myofunctional therapists; dentists; ear, nose, and throat doctors (ENTs); and family doctors.

Things RMTs should consider when treating this population

There are several things to take into consideration when treating individuals with TMJD. These include differential assessment, a history of abuse and post-traumatic stress disorder (PTSD), and the long-term outlook.

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“Massage is only one piece of the puzzle when it comes to treating TMJD. I believe a multifaceted approach yields the best results for our patients.”

Differential assessment

Other serious conditions can mimic TMJD symptoms. We need to eliminate these as the patient's source of pain. For example, TMJD can present with tooth pain, ear pain, headaches, temple tenderness, and jaw pain while eating or talking. But these could also be from an abscessed tooth, ear infection, or temporal arteritis.²⁴ A dentist, ENT, or family doctor can rule out these more serious conditions.

History of abuse and PTSD

Another consideration is a patient history of abuse and PTSD. About 31% to 84.4% of those that have experienced intimate partner violence have PTSD.²⁵

Studies show a strong correlation between TMJD and physical, emotional, and psychological abuse.²⁶ This is a pattern I am noticing in my practice. With this in mind, we can modify our intake and treatment in the following ways:

- **Update intake:** Add a section to cover abuse and PTSD. Include an explanation that physical or emotional abuse can impact bodywork. Explain to the patient that it is important that they feel comfortable and safe during treatment.²⁷ Follow this with an area where patients can indicate a history of abuse and PTSD with an option to include notes.
- **Clear communication:** This will help build trust and prepare the patient for treatment. Go over what they can expect during the assessment and treatment. This goes without saying for all patients, but it is especially important for patients with a history of abuse and PTSD. Discuss any triggers they may have or areas they don't want worked on. Reinforce they are always in control and they can stop the treatment at any time.²⁸



- **Emotional release:** Be mindful that patients may have an emotional release in response to treatment.²⁹ I've seen the jaw and neck areas present as triggers when these were the areas that were abused. It is imperative as massage therapists we stay within our scope of practice. We can be supportive to our patients but must refrain from offering advice or opinions. Reassure them that emotional releases can happen during a massage and it is normal. Pause the massage and encourage them to take slow, deep breaths. If the patient's emotions ease, you can offer to continue. If they feel unable to proceed, reschedule.³⁰

Long-term outlook

It is important to understand the long-term outlook for TMJD. This will allow you to manage patient expectations around results. I've found TMJD that is muscular in origin has more successful outcomes with massage. Patients with old injuries or degeneration may experience improvements, but usually not full resolution.¹² However, don't undervalue the symptom management massage therapy can provide.

Summary

Massage therapy offers a conservative approach for TMJD because it is non-invasive and non-pharmaceutical. This is why I believe it is the best first line treatment for TMJD. Working with this population, I've seen the powerful impact it can have on improving quality of life. With TMJD becoming more prevalent, we need more RMTs providing therapy for this condition and interprofessional collaboration. 📧

References available upon request.

Massage Therapy for People with Post-Concussion Syndrome

By Richard Lebert, RMT

A concussion is a mild traumatic brain injury caused by biomechanical forces and a complex physical process affecting the brain. Commonly reported symptoms are occipital headache, blurry vision, nausea, dizziness, balance problems, a “foggy feeling,” difficulty with concentration, difficulty with memory, fatigue, confusion, drowsiness, and irritability. Clinically, these symptoms fall into four major categories:

- 1) **Somatic:** Headaches, nausea, vomiting, balance and/or visual problems, and sensitivity to light and noise
- 2) **Emotional:** Sadness to the point of depression, nervousness, and irritability
- 3) **Sleep disturbance:** Sleeping more or less than usual and having trouble falling asleep
- 4) **Cognitive:** Difficulty concentrating, troubles with memory, feeling mentally slow or as if in a fog that will not lift

Pathophysiology

A concussion is an injury that typically resolves relatively quickly in most people (symptoms generally disappear for 80% to 90% of patients within 7 to 10 days); however, whiplash symptoms can linger for up to a year or more. Persistent symptoms after concussive injuries often include headaches and neck pain. These persistent symptoms often do not reflect a single pathophysiological entity, but describe a constellation of post-traumatic symptoms that may be linked to coexisting and/or confounding factors, which do not necessarily reflect ongoing physiological injury to the brain.



Post-traumatic headache is a highly disabling secondary headache disorder and one of the most common symptoms after a concussion. In these patients, soft tissue irritation and subsequent nerve sensitization may be a major contributor to symptoms. Most concussive injuries have a high-impact nature, and prompt assessment and rehabilitation of the cervical spine may decrease the likelihood that an individual will develop persistent headaches and neck pain.^{1,2}

Informed consent and shared decision-making

Informed consent will include a discussion about the basic science and the effects of no treatment, as well as the possible risks and benefits of receiving treatment. The therapist and patient will then work together to develop a plan of care based on the individ-



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“A comprehensive assessment helps the clinician come up with a treatment plan that is best suited for the individual. It may involve a physical assessment and detailed health history intake to gather information about the patient’s limitations and course of pain.”

ualized goals and needs of the patient. This approach gives people the opportunity to be engaged in their own health through the process of shared decision-making.

Assessment

A comprehensive assessment helps the clinician come up with a treatment plan that is best suited for the individual. It may involve a physical assessment and detailed health history intake to gather information about the patient’s limitations and course of pain, and it can help identify red flags (i.e., serious underlying pathologies) or yellow flags (i.e., prognostic factors for delayed recovery). This may also help establish therapeutic alliance and identify the biological, psychological, social, and contextual factors contributing to pain and disability.

- **Red flags (serious underlying pathologies):** Red flags are signs and symptoms that raise suspicion of serious underlying pathology. If a serious pathology is suspected, a clinical decision should be made to refer the patient to an appropriate health care practitioner. For patients with neck pain, headache, and/or orofacial pain, vascular pathologies of the neck are an important consideration as part of patient examination.^{3,4} In addition, there are several possible indicators of serious spinal pathologies, including the following:

- Neurological: Cervical cord compression, the demyelinating process, diffuse or substantial motor/sensory loss, progressive neurological deficits
- Fracture: Trauma, osteoporosis risk/ fragility fracture
- Vascular pathologies
- Neurological deficits: confusion, reduced level of consciousness, seizure, limb weakness
- Clinical signs of raised intracranial pressure, such as papilledema
- New visual symptoms: double vision and deteriorating vision

- **Yellow flags (risk factors for delayed recovery):** The assessment process could also include screening questionnaires, such as the Örebro Musculoskeletal Pain Questionnaire or the Optimal Screening for Prediction of Referral and Outcome Yellow Flag (OSPRO-YF) tool, to help identify yellow flags or identify patients at risk of a poor outcome. If the patient develops worsening physical or psychological symptoms, consider a referral to counseling or an appropriate health care professional for further evaluation.
- **Physical assessment:** A physical assessment could include palpation, observing gait, and neurological screening tests, as well as assessing mobility and/or muscle strength. Assessment results should be interpreted in the context of all assessment findings, and individualized treatment plans should be based on the assessment findings and goals of the patient.
- **Orthopedic tests:** Clinicians could also incorporate one or more of the following physical assessment tools and interpret assessment results in the context of all other assessment findings:
 - Physiological temporomandibular joint movements
 - Trigger point palpation of the masticatory muscles

- Trigger point palpation of the cranio-cervical muscles
- Manual screening of the cervical spine
- Cervical flexion-rotation test

Outcome measurements

Clinicians should use appropriate tools and strategies to monitor and evaluate the effectiveness of the treatment plan and adapt care accordingly. This could include incorporating one or more of the following outcome measurements when assessing and monitoring patient progress:

- Self-Rated Recovery Question
- Patient-Specific Functional Scale
- Sport Concussion Assessment Tool 6 (SCAT6)
- Headache Impact Test-6 (HIT-6)
- Post-Concussion Symptom Scale

Treatment

Education and reassurance

Focus on the concept of a person-centered approach that addresses biological, psychological, and social and contextual factors and empowers people with shared decision-making. Provide reassurance and patient education on condition and management options and encourage the use of active approaches (e.g., lifestyle, physical activity) to help manage symptoms. After an initial short rest period lasting 24 to 48 hours, the early introduction of light cognitive and

physical activity can be initiated if the activity does not worsen symptoms (i.e., sub-threshold activities). Reassess the patient's status at each visit for new or worsening symptoms or satisfactory recovery.

Manual therapy

Post-concussion headaches are multifactorial, with evidence for the contributions of muscles and other structures surrounding the cervical spine. A massage therapy treatment plan should be implemented based on patient-specific assessment findings and patient tolerance. For patients with persisting symptoms, it is important to work with the patient and their physician to develop effective self-management strategies. For people who suffer from headaches and fascial pain, soft tissue irritation and nerve sensitization may be a major contributor to symptoms. Gentle manual therapy of the upper back, neck, and scalp may help modulate neuro-immune processes related with the experience of pain. Structures to keep in mind while assessing and treating patients suffering from headaches and fascial pain may include the neurovascular structures and investing fascia of the following:

- Upper cervical spine (suboccipitals, upper trapezius, splenius cervicis, splenius capitis)
- Parascapular muscles (rhomboid major, minor, trapezius and levator scapulae)
- Longus colli and capitis

“A massage therapy treatment plan should be implemented based on patient-specific assessment findings and patient tolerance.”

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“Clinicians should work in partnership with patients to develop a person-centered care plan that considers the best available evidence and the patient’s goals, values, and preferences.”

- Occipitofrontalis
- Corrugator supercilii
- Sternocleidomastoid
- Scalene muscle group (anterior scalene, middle scalene, and posterior scalene)
- Temporomandibular joint
 - Medial pterygoid
 - Temporalis
 - Masseter
 - Suprahyoid muscle group (digastric, stylohyoid, geniohyoid, and mylohyoid)
 - Infrahyoid muscle group (sternohyoid, sternothyroid, thyrohyoid, and omohyoid)

Self-management strategies

Massage therapists not only provide hands-on treatment, but can also develop self-management programs to help patients manage symptoms. Simple home-care recommendations such as self-massage and mindfulness-based stress reduction may help reduce symptoms. Several post-concussion guidelines encourage the use of self-management strategies to facilitate recovery in the first 48 hours after injury, such as light physical activity (e.g., walking and easy activities of daily living), maintaining sleep hygiene, and reducing screen use.

Prognosis

Persistent post-traumatic headache often reflects a constellation of symptoms that may be linked to coexisting and/or confounding factors. Early intervention reduces the risk of cervicogenic headaches developing into

chronic post-concussion headaches. Clinicians should not attempt to treat the concussion directly but instead treat the impairments that may be related to or irritating it based on patient-specific assessment findings and patient tolerance.² Clinicians should work in partnership with patients to develop a person-centered care plan that considers the best available evidence and the patient’s goals, values, and preferences. If appropriate, multi-modal conservative care can be started (e.g., education and reassurance, exercise, manual therapy, hydrotherapy, acupuncture) and the patient’s status reassessed at each visit for new or worsening symptoms or satisfactory recovery. Then, either the patient is discharged, treatment is continued, or treatment is escalated based on the response to the initial treatment plan, a risk/benefit assessment, and shared decision-making.

Key takeaways

A multidisciplinary approach that supports lifestyle factors (such as sleep, stress, and physical activity) can have a profound effect on post-concussion syndrome. Depending on the person’s needs and goals, massage therapists are able to incorporate a number of rehabilitation strategies for post-concussion syndrome based on patient-specific assessment findings including, but not limited to, the following:

- Comprehensive assessment and screening for underlying pathologies (red flags and yellow flags)
- Education and reassurance (person-centered communication, shared-decision making, and active coping strategies)
- Manual therapy (soft tissue massage, neural mobilization, joint mobilization)
- Self-management strategies (mindfulness-based interventions, hydrotherapy, sleep hygiene, remedial exercise programs incorporating stretching, strengthening, and physical activity). ¹⁰

References available upon request.



Jules Poulin, RMT, is a clinic owner and director, educator, entrepreneur. An RMT since 2000, Jules Poulin has dedicated her career to rehabilitation. In 2018, Jules opened From the Neck Up, North America's first and only RMT clinic focused on rehabilitation of the head, neck, voice, jaw, ears, and tongue. Her From the Neck Up course series is set to launch in 2024.

Review of Evidence: Head and Neck

In the massage therapy profession, we commonly treat what patients describe as head and/or neck tension or pain. While this area is relevant for many people, it is important to further understand the symptomatic implications of dysfunction in the head and/or neck.

Whether it be stomatognathic, auricular, neurological, laryngeal, glossal, or neuromuscular, the massage therapist as an evidence-informed care provider can significantly aid in assisting these patients by providing effective rehabilitative care through manual therapy. In this review of evidence, you will find research pertinent to conditions of the head and neck that may benefit tremendously from RMT assessment and treatment, in order to provide an increase in quality of life for patients with these conditions.

Features and impact of dysphagia, dysphonia and laryngeal hypersensitivity in whiplash associated disorder – a qualitative study

Danielle B. Stone, Trudy Rebbeck, Elizabeth C. Ward, James E. Elliott. (2023) *Disability and Rehabilitation*. doi:/10.1080/09638288.2022.2098395

Most manual therapists will encounter patients who have had a whiplash injury in their clinical practice. This type of injury can present itself in myriad ways, which is why it is important for manual therapists to look beyond

the standard presentations of this injury type.

This study aimed to explore the role of whiplash in dysphagia, dysphonia, and laryngeal hypersensitivity.

A qualitative interpretive description design was used to study 11 participants with chronic whiplash-associated disorders and self-reported swallowing, voice, and/or throat-related problems. They completed a baseline symptom questionnaire and were invited to participate in a videofluoroscopic swallow study to investigate baseline swallowing biomechanics. Further, the patients gave semi-structured interviews to explore features of swallowing and voice/laryngeal sensory complaints; their responses were analyzed using thematic analysis.

The study identified the following in patients with whiplash-associated disorder:

- High baseline levels of self-reported neck pain, throat-related disability, and psychological stress
- A range of features of dysphagia (i.e., swallowing difficulties) and dysphonia (i.e., vocal difficulties)
- Changes in swallowing and participation in voice activities

- Psychological and emotional impacts
- Co-existing features of laryngeal hypersensitivity
- Barriers to management

As an integral part of rehabilitation for whiplash-associated disorders, RMTs should include questions about voice and swallowing symptoms in their assessments, assess and treat the musculature of the anterior neck (if comfortable and when applicable), and direct the patient to their primary care provider to request a referral to an ear, nose and throat (ENT) specialist and speech language pathologist (SLP). As this is a vulnerable area for treatment, RMTs should focus on communicating with patients during the application of massage to ensure they feel safe and comfortable.

Suboccipital muscles, forward head posture, and cervicogenic dizziness

Yun-Hee Sung (2022) *Medicina (Kaunas, Lithuania)*. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9786116/>

Dysfunction of the vestibular or non-vestibular systems can cause dizziness or vertigo. However, dizziness caused by dysfunction

of the non-vestibular system, especially cervicogenic dizziness, is not commonly known. This research looks at the suboccipital muscles, which act as stabilizers and controllers of the head, and how structural and functional changes to these muscles can induce dizziness.

While there are various reasons for non-vestibular dizziness, this review of more than 100 articles focused on cervicogenic dizziness (CGD), which is caused by trauma, inflammation, degeneration, or mechanical dysfunction of the cervical spine. It is characterized by unsteadiness, neck pain, stiffness, headache, dysphagia, nausea, visual disturbances, ear fullness, tinnitus, temporomandibular dysfunction, joint pain, and other psychological problems.

Several contributing factors to the relationship between the suboccipital muscles, forward head posture, and CGD have been noted in this research:

- Abnormal somatosensory input
- Changes in the function and structure of the suboccipital muscles
- Tension of the myodural bridges (the connections between the dura mater and suboccipital muscle fascia)
- Trigger points

The abnormal input to the suboccipital muscles caused by forward head posture in certain patients might cause CGD, as it can induce a change in alignment and an excessive load on the upper cervical spine. This causes structural and functional changes in the surrounding muscles, especially the suboccipitals. Further, unnecessary stimulation may persist because of ligamentous and facet joint instability. These

alterations transmit abnormal proprioceptive inputs to the central nervous system, resulting in inconsistencies with vestibular and visual inputs, which can manifest as dizziness, pain, light-headedness, and headache.

When it comes to the treatment of dizziness from the perspective of the RMT, it is important to assess the patient using a tool like the head-neck differentiation test. The test is performed with the patient sitting on a swivel chair. Provocation of dizziness with trunk rotation under a head stabilized in space implicates the cervical spine, whereas dizziness with head and trunk rotation together indicates a vestibular component to the patient's symptoms. The former is indicative of a treatment plan with the RMT, while the latter would indicate a referral to an ENT and/or a vestibular physiotherapist.

Treatment of somatosensory tinnitus: a randomized controlled trial studying the effect of orofacial treatment as part of a multidisciplinary program

Annemarie van der Wal, Sarah Michiels, Paul Van de Heyning, Marc Braem, Corine M. Visscher, Vedat Topsakal, Annick Gilles, Laure Jacquemin, Vincent Van Rompaey, Willem De Hertogh. (2020) *Journal of Clinical Medicine*. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7141361/>

It is not uncommon for patients with auricular issues to be assessed by an ENT and be informed that the potential causative factor for their symptoms is one or both temporomandibular joints. Tinnitus is by definition a perception of sound in the absence of overt

acoustic stimulation, which can present as hissing, sizzling, or ringing in one or both ears.

The purpose of this study was to evaluate the effect of orofacial treatment on tinnitus in patients with temporomandibular somatosensory tinnitus (TST).

A total of 80 patients with TST participated in the study. They received information and advice about tinnitus, as well as conservative orofacial treatment (physical therapy and dental occlusal splints if bruxism was identified). The treatment effect on tinnitus severity was investigated using a tinnitus questionnaire and the Tinnitus Functional Index (TFI). All participants fit the established criteria for TMD.

A total of 18 orofacial treatments were provided by physical therapists trained in temporomandibular joint rehabilitation over a 9-week period. The physical therapy included massage of the masticatory muscles, stretching exercises, relaxation therapy, and cervical spine mobilizations and exercises.

The findings were that 34% of patients showed clinically relevant improvement on the tinnitus questionnaire immediately after treatment, and 41% showed clinically relevant improvement using the TFI. After the follow-up period, 46% and 61% of patients had clinically relevant improvement on the questionnaire and the TFI, respectively, compared to baseline.

The controlled trial demonstrated that a multidisciplinary, non-invasive orofacial treatment showed positive effects on tinnitus severity, and that this can be expected to help in patients with TST.

The role of the RMT in the treatment and management of TST, after an ENT has ruled out any pathol-

ogies, is to provide assessment, treatment, and a self-care program designed to address the muscles of mastication and mandibular function.

Temporomandibular disorders in burning mouth syndrome patients: an observational study

Massimo Corsalini, Daniela Di Venere, Francesco Pettini, Dorina Lauritano, Massimo Petruzzi. (2013) *International Journal of Medical Sciences*. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3837237/>

The presentation of temporomandibular dysfunctions (TMDs) can vary greatly, from localized pain to headaches to auricular issues, and myriad other often-misunderstood symptoms. This observational study's purpose was to determine if there is a link between burning mouth syndrome (BMS), which is a chronic disease characterized by a burning pain in the tongue or oral mucous membranes associated with a feeling of dry mouth and/or taste alterations and symptoms of TMD without accompanying clinical and laboratory findings.

A total of 44 patients were enrolled in the study, which established BMS subtypes. An evaluation of the masticatory system was performed on all subjects. This resulted in determining that 65.9% of BMS patients showed signs and symptoms of TMD.

Further results demonstrated that:

- 45.5% of patients reported significant facial pain that was different from burning, most commonly in the masseter,
- 72.7% of patients showed para-functional habits such as bruxism or biting of the lip and cheeks,

- 34.1% of patients presented with clicking in one or both temporomandibular joints, and
- 50% of patients experienced pain on palpation of the muscles of mastication.

Though the relationship between BMS and TMD requires further study, it is to note that the high prevalence of TMD within this patient demographic could benefit from assessment, treatment, and self-care programs related to the craniomandibular anatomical area from manual therapists.

Evidence - The intraoral palpability of the lateral pterygoid muscle - A prospective study

Wolfgang Stelzenmueller, Horst Umstadt, Dominic Weber, Volkan Goenner-Oezkan, Stefan Kopp, Jörg Lisson. (2016) *Annals of Anatomy*. <https://pubmed.ncbi.nlm.nih.gov/26706107/>

In the dental and manual therapy disciplines, it has widely been debated if the palpation of the lateral pterygoid is possible due to its topography. This study has shown that it is indeed possible to palpate the inferior caput of the lateral pterygoid muscle, which plays a significant role in TMD. The aim of this study was to answer the following questions:

- Is it possible to visualize, document, and objectively evaluate the intraoral palpability of the lateral pterygoid muscle?
- Can the effects of intraoral palpability of the lateral pterygoid muscle be evaluated by magnetic resonance imaging (MRI)?
- Can the effects of intraoral palpability of the lateral

pterygoid muscle be evaluated by electromyography (EMG)?

The method used in this study was intraoral digital palpation of the infratemporal fossa, visualization of the lateral pterygoid muscle, and active ipsilateral laterotrusion in conjunction with mandibular depression and elevation on the side of palpation. The success of the palpation was confirmed by MRI and EMG, which concluded that the above method for palpation of the lateral pterygoid is feasible.

While this study has demonstrated that the lateral pterygoid muscle can be palpated with the aid of visualization and with the patient's active participation of specific mandibular movements, it is important that manual therapists take into consideration that even if direct palpation is possible, there may be some barriers to accessibility, like pain, patient apprehension, and specific anatomical structures. Considering how to influence this anatomical area should be more important than direct anatomical palpation.

Conclusion

The role of RMTs in rehabilitation of the head and neck can be one of tremendous value for patients who have been seeking guidance and relief for their symptoms. This review of research demonstrates that the core knowledge and training of RMTs can be applied to complex patient presentations through anatomical knowledge, assessment, techniques, and when necessary, referring out. Using therapeutic analytical skills, staying current on research, and providing evidence-informed care is beneficial for both patients and your practice as a health care provider. ■



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