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Treating the Trigger

In the little-known realm of trigger point therapy, this PT is an expert

By Brian W. Ferrie

A native of the Netherlands, Jan Dommerholt, MPS, PT, earned his physical therapy degree and immigrated to the United States in 1986. Within a few years, he became intrigued by the concept of trigger point therapy. Now his entire practice revolves around it. Dommerholt is president and owner of Bethesda Physiocare and Shady Grove Physiocare in Maryland. He also runs Myopain Seminars, educating interested practitioners around the world. Dommerholt took the time last month to speak with ADVANCE about trigger points, their impact and treatment techniques.

ADVANCE: What percentage of your patients present with some type of trigger point issue?

Dommerholt: I would say 98 percent at both clinics. But that's partly because it's my specialty. Nearly everybody in the world has them and trigger points are likely part of the picture for any musculoskeletal pain problem. That doesn't mean they're the cause of the pain, but certainly a contributing factor. I look at the pain associated with trigger points more as a neurological phenomenon and not so much a muscle phenomenon.

ADVANCE: What are some possible causes of trigger points?

Dommerholt: It's usually a form of overload on the muscle. We think it's very common after eccentric loading, which means muscles are lengthening while they're contracting. That is very common in life, including every time you walk down steps. Repetitive strain injuries (RSI) almost always are trigger points. Another potential cause is awkward postures, especially combined with repetitive movements, like you sometimes see in computer workers.

You also see it in most musicians. Holding a violin for eight hours a day and doing very fast finger movements, you're almost doomed to get trigger points. They may also be associated with internal organ disease. Trigger points in the abdominal muscles of women, for example, are 90 percent predictive of endometriosis.

ADVANCE: How long have trigger points been a specialty for you?

Dommerholt: I met Dr. Janet Travell in 1989. She was basically the founder of this whole field and had been John F. Kennedy's White House physician. In 1989, I saw her do a workshop that I found very intriguing. From then on, I started looking into what this was all about. In 1995, I joined Dr. Robert Gerwin, a neurologist who had started a pain management clinic. He worked very closely with Dr. Travell and we have expanded our course program tremendously. I'm probably one of the most published physical therapists on trigger points, having written 22 chapters in medical textbooks. I also teach many courses, going to Europe six to eight times a year.

I didn't plan for so much growth; it just happened. I saw Dr. Travell multiple times after our first meeting. She did many lectures in the Washington, DC, area before passing away in 1997. The whole idea that muscle can be part of dysfunction is still not taught extensively in PT school or medical school. Muscle is a bit of an orphan—there is no medical specialty that has specifically adopted it. I think that contributes to why research on trigger points is scattered all over the literature. There is no one field that says we are the muscle specialists and everything you want to know about muscle you can find in our journal.

ADVANCE: When did you found Bethesda Physiocare?

Dommerholt: In August 2006. It's still a relatively young and small PT practice. The vast majority of my patients have already been through PT and additional services elsewhere. But they didn't get better in spite of what other people did or sometimes because of it. We have a subspecialty of jaw issues and facial pain at the Bethesda office. And another subgroup, about 20 percent of my patients, are musicians. That's partially because I used to be a musician in the Netherlands and have always been interested in the specific problems of musicians.

ADVANCE: Among your patient population, where do trigger points most commonly present?

Dommerholt: They're everywhere. I think most people we see are neck and back patients. People with RSIs have it in their arms and shoulders. Musicians also typically have it in their arms and shoulders, as well as the hand and neck. With athletes, we see it a lot in the low back and lower extremities. The diagnosis of plantar fasciitis is almost always due to trigger points at the calf muscles.

So it's a different paradigm of how to look at people. Very often you find patients have trigger points that may not be the specific cause of pain, but certainly once you treat them, that pain goes away. A lot of the people we see with neck and facial pain also have headaches, which we can address by treating trigger points in the neck muscles.

There's a tremendous amount of literature on that. Again, it's scattered—not in a particular discipline. But in one study, 93 percent of migraine patients had active trigger points in the neck muscles compared to only 29 percent in the control group. That's a significant difference, yet very few neurologists look at a patient's neck muscles.

ADVANCE: If someone has a trigger point, is it basically always palpable to the therapist?

Dommerholt: Yes, but only if the therapist has been properly trained. I think that's often a misconception. You have to learn how to palpate for trigger points. I teach many courses all over the world and I've seen very few naturals. Sometimes that's used as a criticism of the whole trigger point concept. If it's that hard, people say, it can't be true.

To me, that is a silly argument. Most physicians don't know how to listen with stethoscopes to people's heartbeats until they've done it many times. This is no different. Once you learn how to palpate, it's easy. I don't find the work I do to be very difficult, but I've been trained quite well by the people who founded it. And most people who take our courses are very happy with the results. I can't tell you how many times they come up to thank me and say, "You made me interested in physical therapy again. I was kind of burned out and now it's amazing the results I see with patients."

I was in the Netherlands in January to teach a private course at a PT clinic. All the therapists who worked there made it a point to thank me for how much the

course changed their lives. It might sound like preaching a gospel and I don't want to sound like that. But 47 percent of your body weight is muscle and there's no discipline that looks at muscle as a specialty.

What's surprising to me is that more people aren't practicing this at a high level. I have a very small PT practice and I get patients from all over this country and other countries. We have seen patients from Belgium, England, Canada, New Zealand and Saudi Arabia. People find us on the Internet and e-mail or call. Most of them respond very well but ideally they should be able to find treatment closer to where they live.

ADVANCE: What is the age range and gender breakdown of the population you treat?

Dommerholt: My youngest patient right now is 10 and my oldest is 93. I have not noticed a significant difference in the percentage of men compared to women. I do think there's a difference in how men and women express it, but studies show the prevalence is pretty equal.

ADVANCE: What are some examples of trigger point treatment techniques?

Dommerholt: The first priority is to conduct a very thorough evaluation and not just assume that pain is due to trigger points. Because people may have facet joint injuries or internal organ disease, patients with widespread pain often have a diagnosis of fibromyalgia. You need to look at whether any other factors could be important. You don't have to make that diagnosis as a PT, but you need to be fairly familiar with other potential conditions.

If you decide part of the problem is trigger points, there are different treatment options. I use a lot of dry needling, which is not legal in every state. I think that's kind of bizarre, but that's the way it is. Nine states have expressed that PTs can do dry needling. In countries like Canada, a national ruling has made it legal for all physical therapists. But here, it's legislated by states and a few have specifically said it's not OK.

ADVANCE: Why do you believe it's so controversial that some states would outlaw it?

Dommerholt: I think it's lack of knowledge, for one. It's also invasive, which is not typically done in physical therapy. But if states allow indwelling EMG

studies, which are invasive, trigger point dry needling is actually much easier. You need to study it; you can't just do it. You have to take some courses and I'm pleased to say there are two or three programs in the United States. I think there are concerns from acupuncture societies that we're doing acupuncture without a license. Sometimes there are concerns from medical doctors who think we're practicing medicine. So there are a lot of conflicting ideas but I think most of the problem is people are not familiar with it.

ADVANCE: What exactly is dry needling and how is it effective?

Dommerholt: Once you have palpated a trigger point and deemed it to be active—at least partially responsible for the pain complaint—you place a solid filament needle into the trigger point. Before you put the needle in, you need good anatomical knowledge to picture a three-dimensional image of exactly where the tip of the needle is at any given time. That way you can prevent potential injuries like a pneumo-thorax. Basically once the needle hits the trigger point, there is a twitch response indicating you're in the right place.

Then you withdraw the needle from the muscle but not from the skin, change the direction of the needle a little and bring it back into the same area to get more and more twitch responses. The objective is to elicit those twitch responses, which are spinal cord reflexes. And if you treat the trigger point properly, there will be no twitch responses left.

But dry needling is never a treatment by itself; it is always part of a bigger package. After that, you may do soft-tissue techniques on the muscle to improve the blood flow or utilize treatment modalities. In the Shady Grove office, I use a lot of laser for trigger points, which has shown to be rather effective. It has the potential to change the energy crisis in the trigger point and gives the body an opportunity to create ATP.

The trigger point treatment is only a measure to get people out of pain. Patients then need to be functional again. So you can do all the normal physical therapy techniques like posture training, stabilization exercises, cardiovascular, stretching and strengthening. Manual trigger point therapy, which is basically manual techniques applied to trigger points, is also very helpful. But in the manual therapy world, trigger points are not highly regarded.

There are prominent manual therapists who suggest trigger point therapy is nothing but palliative treatment. But there are positive changes. The Journal of Manual and Manipulative Therapy devoted an entire issue (December 2006) to trigger points, which was the first time an American physical therapy journal

had ever done that.

ADVANCE: So the two basic treatments you use are manual techniques and dry needling?

Dommerholt: Yes. In Maryland and the UK, physical therapists can also use trigger point injections. But that's very unusual. Maryland is the only state where PTs are allowed to do it and I'm probably the only one in the whole state who does.

ADVANCE: What factors influence which of the three treatments you'll utilize?

Dommerholt: I provide injections only when patients request it because that is done with 0.25 percent lidocaine. So it creates a numb feeling, which some people really appreciate over the dry needling. My first choice is almost always dry needling. The main reason for that is it's the quickest way to get someone out of pain and help the muscle function normally again.

After a few treatments of dry needling, typically I don't have to continue it anymore. We switch to manual techniques and then eventually to conditioning, posture correction and strengthening. I used to do that in a different sequence; reserving the dry needling for those cases when manual techniques didn't work. But over the years, I've discovered it's more beneficial and the total duration of therapy is shorter when you start with dry needling. For patients who don't want needles, I treat only with manual therapy techniques.

ADVANCE: What percentage of patients do you use the different treatments with?

Dommerholt: All of my trigger point patients receive some type of manual therapy and almost 100 percent receive dry needling. I do injections with less than five percent. There is no benefit to injections other than the feeling of numbness. In the literature, you find many references to two studies presenting that post-needling soreness was worse with dry needling versus injections. But if you read those studies carefully, it's clear the dry needling was done with syringes.

If you stab a syringe in someone's body without an injectable, it hurts, because it's basically a cutting, beveled-edge knife. Compare that to needling with a solid filament needle, which is much thinner and easier to work with. People

who are injected with syringes get more bleeding. A solid filament needle is more practical and quicker for patients, as well as less cumbersome. There's no real difference in the effect on the trigger point with a needle compared to an injection. The needle is what makes it work, not the injection.

ADVANCE: Are there any other thoughts you would like to add on the subject?

Dommerholt: I wish that PTs would recognize trigger point therapy does not replace anything. It's not a religion or belief system, but it is one of the best examples of evidence-based physical therapy. If you look at the literature, the number of references is impressive. They're just spread out in different fields, including OB/GYN, EMT, TMJ, medicine and a little bit in PT.

It's not bundled properly. It should be part of what therapists learn in school, instead of randomly by a small percentage later in their careers. The enthusiasm in the United States for trigger points is marginal. It came from this country but in Europe it's much more popular. My courses there are always sold out. People here don't believe it's as important to look at muscle tissue, even though it's almost half our body weight.

I think it goes back to the orphan organ concept. And PTs often don't focus on chronic pain. Schools are failing tremendously in preparing future therapists for what pain really is, a neurological problem. Every PT school should have a course in chronic pain. Therapists are also underrepresented in the pain societies and that's unfortunate because most of our patients come in with reports of pain. PTs love to focus on function but my opinion is you can't truly restore function without getting rid of pain first.

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