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**Interstitial Cystitis Network - Chat Log (© 1999, www.ic-network.com)**

**Topic: Questions & Answers on Pelvic Floor Dysfunction**

**Speaker: Jerome Weiss MD, UCSF Medical Center & the Pacific Center for Pelvic Pain and Dysfunction**

<icnmgrjill> Welcome everyone to a special ICN chat for August 4, 1999 featuring Dr. Jerome Weiss of San Francisco, California. Dr. Weiss is Associate Clinical Professor at the University of California, San Francisco. He is also the founder of the Pacific Center for Pelvic Pain and Dysfunction. Welcome to our chat today Dr. Weiss.

<drweiss> Thank you.. its nice to be here!

----- Q&A Begins -----

**<icnmgrjill> You've been long known in California as a very compassionate care provider for IC patients ad, in particular, for your work with pelvic floor dysfunction. We welcome your insight and knowledge today as we educate IC patients and providers from around the world. How did you first become interested in pelvic floor dysfunction?**

<drweiss> As a urologist, I became very frustrated with the methods available to treat patients who had urgency and frequency. Therefore, I looked for alternative methods of treating pelvic floor spasm or spasm or tension around the urethra as the underlying cause for the symptoms.

My journey took me to acupuncture, which appeared to be somewhat helpful in decreasing tension of the pelvic floor muscles that was creating some of the symptoms. Unfortunately, acupuncture wasn't successful enough for me to be satisfied and I had to delve into the underlying problems.

Myofascial trigger points or tender points in the muscles are at the root of pelvic floor tension. I began to study myofascial trigger points or myofascial pain. Myofascial refers to muscles and the coverings of muscles which become involved in the process together.

I was able to identify these tender points upon examination through the rectum or vagina in the muscles surrounding the urethra as well as those on the side walls of the pelvis. A trigger point is a tender point that refers pain to other areas and since these muscles connect to the pubic bone and the tail bone, they can create wide spread pain.

The treatment for these tender points are generally manual therapy, meaning stretching, compression and possibly injecting these areas with anesthetic agents. Since I knew that this existed but was not experienced, I sought the help of experts in the field of myofascial pain. Uniformly, their answers were that they were not comfortable working in the pelvis. And, to answer the question of why I got started. That is the reason. There was no one else to help me.

**<icnmgrjill> Let's do a little bit of physiology so that people understand better the muscles structures in the pelvic. Could you explain this for us?**

<drweiss> Yes, the pelvic floor muscles consist of the floor of the pelvis.. the levator ani muscles, which go between the pubis and the sacrum. There are a central group of these muscles that surround the urethra, the vagina and the rectum. Beneath this floor, there are also sphincter muscles around the anus and urethra. The side walls obterator internus muscles and the piriormyusformus muscles that control the movement of the hip. But, because they insert on the pubic bone, they also can have some effect on the urethra. The pudendal nerve supplies to the muscles and skin of the pelvic floor.



Overall, these muscle groups serve functions of support of the internal organs. They act as sphincters for the bladder and they also are involved in sexual function for orgasm.

**<icnmgrjill> At the ICA conference here in Northern California, you made mention of dogs wagging their tails.**

<drweiss> Yes, that is the other response of the pelvic floor. The pelvic floor responds to stress. As people with IC know, stress many times will exacerbate your symptoms. The mechanism of response can be understood when you look at a dogs tail.

A dogs tail mirrors the emotions. When the dog is happy, the tail moves from side to side very loosely. When the dog is stressed, the tail pulls tightly between its legs. The pelvic floor muscles are the tail wagers.

When men and women lost the tail (during evolution), they still retained the muscle structures. When we stood upright, they become supporting muscles rather than wagers. But, none the less, when humans are stressed the tail pulls forward.. the coccyx pulls forward. When it pulls forward, it compresses the organs that run through those muscles and it pulls them up against the pubic bone. Therefore, there is more tension and constriction around the urethra and the vagina. Therefore, symptoms can occur just because of the tension.

**<icnmgrjill> One of the things you also mentioned is that of all of the muscle groups the pelvic floor never rests through out the day, right?**

<drweiss> Yes, that's right. It's the most active muscle in the body. It must maintain a constant tone to support the organs and it must contract instantly for any sudden increase in intra-abdominal pressure from coughing or sneezing.. (i.e. mechanical stress) During sleep, sphincters contract in response to the bladder and rectum filling and there is contraction of the pelvic floor muscles in the erections of men at night as well! In addition, we already discussed how they respond to stress. Therefore, they have all of these things going on continually!

**<icnmgrjill> It has become very popular to talk about IC as a nerve problem or as an epithelial problem in the bladder. But one of the things that I find interesting about your approach to urology problems is that it accounts for and incorporates many of the diverse research studies and findings, from mast cell degranulation to nerve inflammation. So, let's talk a bit about your approach to IC. What do you think is the cause for IC?**

<drweiss> I believe that the dysfunctional tender muscles of the pelvic floor stimulate nerve endings in the spinal cord that lie adjacent to the nerve endings of the bladder. The fact that the bladder and pelvic floor work in synchrony shows that there is close nerve connections.

For example, when one wants to urinate they relax muscles of the pelvic floor. When one stops urinating, they contract the muscles of the pelvic floor.

When the painful stimulus from the muscles activate the bladder nerves, signals are sent backwards from the nerves into the bladder. Once that occurs, the nerve endings in the bladder release substance P and other neurotransmitters that cause mast cell degranulation and release histamine, serotonin and prostaglandins. All of these substances can irritate the bladder wall and thin the bladder lining and create the symptoms of IC.

There are two studies that support this concept. Scolsayni (sp?) stimulated the spinal cord nerves in a rat that correspond to the bladder nerves and was able to create a neurogenic inflammation that is redness, swelling in the bladder vaginal opening and other pelvic organs. Lavell stimulated the sacral ganglia and decreased the permeability of the bladder lining in a rat to water and urea. Therefore, by this mechanism, stimulation of the pelvic floor muscles can create the bladder wall changes.

**<icnmgrjill> You have some important view points about the history of the development of IC like symptoms. Can you share these with us?**

<drweiss> Yes! The underlying cause of muscle dysfunction is myofascial trigger points which is a hyperirritable spot in the muscle that refers pain and is tender to touch. Myofascial trigger points (MTP) develop from repetitive, sustained or severe overload of the muscle. Active MTP is one that will give symptoms immediately. Latent MTP is asymptomatic unless it is touched.

The development of an active MTP may be the result of a series of events that add together.. into an injury pool. The muscle may eventually exceed a threshold whereby a latent trigger point develops into an active trigger point. Through various life experiences,

there can be an increasing degree of tension which eventually causes the symptoms to develop. Some of these are:

1. holding patterns and tensions in the bladder floor that develops at an early age. This can be the result of sexual abuse or traumatic toilet training and even dance or gymnastic training that teaches children to hold tight those muscles.
2. added to these tensions.. can be repetitive minor trauma.. straining to have a bowel movement or for constipation.
3. brief overload from an accident, or fall, or sports injury
4. direct physical trauma from bike riding, childbirth or gynecologic/urological surgery or instrumentation.
5. Inflammation, from urethritis, prostatitis, cystitis, endo, vaginitis and/or anal fissures
6. referred pain from other areas or the viscera.

So.. let's look at an example. A child has undergone some dance training that caused pelvic floor tightness. Through the next twenty years, she has had some bladder infections and vaginal infections. Throw in a back injury and/or extreme stress and, eventually, the final triggering event could be a very minor episode of stress or a bladder infection that causes the muscle to exceed its threshold and creates symptoms.

The surprising aspect is that the final triggered event might be such a small trauma that it is not considered as a cause or, indeed, "the" cause. It is just one of a string of abuses the results in the development of the muscle trigger point.

**<icnmgrjill> So.. one of the things that we see in an IC patients daily life is that it feels like almost anything can cause a flare. In fact, we often agonize over trying to figure out why, one day, its food, the next is sex and the day after that it might be driving in a car. So, in essence, what you're referring to is the underlying health of the muscles and its ability to respond to stress?**

<drweiss> Well, what I was going to say is that there are various events that can cause increased nerve sensitivity. They can range from stress (which has an effect on decreasing the bodies on pain inhibiting mechanisms) to lack of sleep (which also has an effect on increasing nerve sensitivity). Dietary foods, such as the monoamine precursors like hard cheeses and processed meats can cause an effect on nerve sensitivity. Hormonal fluctuations have been shown to impact nerve sensitivity, especially pre-menstruation, and it may be a combination of these factors that are important in exceeding a threshold that results in pain!

For example, a person may not have pain with certain food unless it is eaten pre-menstrually or perhaps not have pain unless they have constipation and a back problem and didn't sleep well that night. So, we're dealing with nerve sensitivities but also changes in muscle tension from stress, activity, other traumas, viral infections, temperature changes and anything that can activate and/or

make you more susceptible to trigger point sensitivity. These leads into a theory of treatment whereby we are looking at a massive amount of events that are occurring in that person that require attention in order to calm the nervous system.

**<icnmgrjill> You're referring to central sensitization, right?**

<drweiss> Central Sensitization (CS) means that the spinal cord nerves and the nerves in the brain have been changed from chronic painful input. It is like a phantom leg syndrome. When a leg is amputated, pain may remain because of the nerve sensitivity. We must calm or decrease the sensitivity of these nerves in order to improve the symptoms of IC patients. Studies show that if the painful input is disrupted the spinal cord nerves can revert to a more normal pattern. Therefore the objective of treatment is to quiet any painful input going to the sacral spinal cord. We must calm not only the bladder, the pelvic floor and surrounding pelvic muscles but we must also calm the mind, pay attention to sleep and diet and activities.

*To treat the bladder alone and ignore all of these other factors would be like trying to put out a fire and not turning off the fuel line to the fire.*

**<icnmgrjill> Can you share with us a bit about your specific treatment of IC patients?**

<drweiss> As I just noted, the entire person must be treated. The cornerstone in the treatment program (for men and women) would involve the dysfunctional pelvic floor. The evaluation consists of a digital (manual) examination of the muscles through the vagina or rectum to identify any trigger points or muscle tension or contracture.

When found, they are eradicated with the use of manual therapy techniques of stretching, compression and sometimes injecting trigger points with anesthetic agents. In addition, muscle function of contraction and relaxation is evaluated, since weak muscles are more susceptible to trigger points and muscles that do not relax will maintain symptoms.

These latter problems are treated using biofeedback and kegel instructions for both strengthening and relaxation, which is used typically in a home program. The home program will also include instructions and the use of spouses or significant others to carry out manual therapy techniques.

**<icnmgrjill> Let me just say here that this has been one of the highlights for patients in our local support group who have seen Dr. Weiss. This provides a wonderful opportunity for spouses to not only be involved, but to actually physically feel that something is wrong. So, instead of "wondering" or "imagining" what IC feels like, the spouse can actually touch it and then they believe. Most importantly, they can, for the first time, actually HELP their loved one. Rave reviews from our participants my friends!**

<drweiss> I also don't want leave out bladder therapies to calm the input from the bladder, such as tricyclics antidepressants, Elmiron etc. These treatments can give temporary relief of symptoms and can bring the trigger points from active to latent, but the underlying muscle problem cause can still persist. Therefore, if a person undergoes a stressful event or has intercourse or gets very cold, these points can be reactive and the process (flare) stimulated again. It's good to do these treatments, but you can also do more. It's a combination approach.

Patients must also attempt to identify anything that cause a flare. The point is to keep the nervous system from being stimulated by painful events. Therefore, if there are certain activities (bikes, foods, life situations) that create problems, you must address and avoid them.

**<icnmgrjill> I'm ready to take questions from the floor. Our first question is about clitoral pain and sensitization. This is one of the "secrets" of IC that some patients don't mention to their doctors, that they suffer from occasional intense bouts of clitoral sensitivity, arousal or pain. Any suggestions?**

<drweiss> Yes, this is relatively easy to explain. As I mentioned, the pudendal nerve innervates all of the structures of the pelvic floor. The very end of the pudendal nerve goes to the clitoris and runs adjacent to the urethra. The muscles around the urethra that are involved with spasm and trigger points will irritate those nerves and therefore create that sensitivity in the clitoris. The treatment is going to be working manual therapy to get the tension out of the muscles and trigger points. Occasionally, I inject that area with anesthetic.

**<icnmgrjill> Julie has the next question. She says that she has a 10 year old daughter who has a sphincter muscle disorder that is causing her to get bladder infections. Could this be a form of PFD? Where would you suggest that we take her for further evaluation?**

<drweiss> Without knowing more about it, I can't address it. It's possible, but it's hard for me to know without an examination and more thorough knowledge of her history

**<icnmgrjill> Do you treat children frequently?**

<drweiss> Not frequently for pelvic floor dysfunction..

**<icnmgrjill> Our next question is from Lisa G. She wants to know what the success rate of biofeedback is compared with the trigger point therapy?**

<drweiss> Biofeedback will not get rid or eradicate trigger points. Biofeedback will lower muscle tension but it would be very difficult for it to lower muscle tension where trigger points remain.

Biofeedback works much better when the trigger points are gone.

**<icnmgrjill> Our next question asks about a common discussion point among some ICers who feel that, at times, their pain sensations travel through their body, such as in RSD. Have you found patients experiencing reflected pain into other parts of their body?**

<drweiss> Yes. Referred pain from pelvic floor trigger points is common. Not only that, but patients who have pain in the pelvis, may walk or sit differently and therefore create stresses and strains on other areas of the body that will eventually become painful.

The entire body is interconnected as if one pulls on a sheet and wrinkles go across the bed, just from one tug in the corner. The body has a similar covering.

**<icnmgrjill> This question is from Diane. IC patients often struggle with a sensation that they haven't emptied their bladder fully and, in many cases, they haven't and, say, 100 ccs of urine remain in the bladder. Any suggestions on how patients can relax more completely to urinate??**

<drweiss> The basis of that symptom is urinary sphincter tightness. In order to decrease that tension, patients must learn how to void properly trying to relax the muscles perhaps by doing a kegel exercise, stressing the relaxation part, i.e. a short contraction but then letting the muscles relax. This can be better accomplished by formal biofeedback training and certainly it is also helpful using manual therapy of stretching the area around the sphincter to help the muscles relax.

**<icnmgrjill> Andrea wants to know what role substance p plays in the pain cycle?**

<drweiss> Substance p is very important in the product of IC symptoms because it creates a sprouting of nerve fibers in the bladder wall. As I described earlier, stimulating the bladder nerves will create the release of substance p in the bladder wall which, in turn, causes mast cell breakdown and the release of inflammatory substances.

In addition, substance p plays a large role in central sensitization of the spinal cord. When the nerves that run into the spinal cord are constantly painful, substance p is released in the spinal cord

which causes a spreading of pain throughout various areas surrounding the pelvis and bladder. It also creates spontaneous pain, without any provocation.

**<icnmgrjill> Julie wants to know, which comes first, IC or PFD?**

<drweiss> I believe that the pelvic floor becomes involved first. There are studies to show that patients with IC, a large percentage of patients with IC, have had voiding dysfunctions as children. Many patients will begin having symptoms involving pelvic floor symptoms prior to developing IC, such as multiple operations for hemorrhoids, fissures, gynecological surgery and other traumatic events.

**<icnmgrjill> We have one last question. It's from me! Sometimes when I'm sitting down, I get what I think is a pelvic floor muscle symptom. It feels like I'm sitting on a funnel, where a sensation starts on the surface but then also moves deep into the pelvis. I associate this with sitting. Is this common?**

<drweiss> This is again a symptom of tension, trigger points that are very sensitive and respond to pressure. The sensation ball or fist in the perineum is common and this is a part of the entire process.

**<icnmgrjill> That's what I thought! Dr. Weiss, we've taken much of your time this afternoon. Thank you for speaking to IC patients via the IC Network. You've helped many of us understand the possible connections between symptoms and how they relate. And that makes us feel less crazy and more like there are providers who are really starting to understand IC! Thank you so much!**

----- Q&A Ends -----

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*Special gratitude to Julie Halbur for coordinating this exceptional presentation.*

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