Current Directions In
Women's HEALTH
Fall 2016
A Division of the Canadian Physiotherapy Association

Word from the Chair

September marked the start of a new year for the Women's Health Division (WHD) executive committee, and we are happy to announce that we have eagerly started planning an exciting webinar and a pre-Congress course to send your way in 2018.

As you saw in our e-blast a few weeks ago (or perhaps at our June AGM), the WHD recently released a new strategic plan that includes growth of core initiatives like our web resources, monthly e-blasts and professional development opportunities. We hope that over the term of our strategic plan (2017-2020), we will be able to expand and empower the volunteer committees that run these initiatives in order to bring you better and better services. At any point, if you would like to help us improve the services the WHD provides, we invite you to join one of our subcommittees (in the domains of public relations, education, research and newsletter creation) by contacting our secretary Juliet at whdsecretary@gmail.com.

Taking a step aside from typical newsletter addresses, I would like to take this opportunity to make WHD members aware of some important changes that have recently been made to Division funding:

In September, Divisions were informed that we would be given one week to revise our budgets for 2018 in light of new costs that would be allocated to us reflecting the work that CPA staff do for Divisions. This was announced as an effort to balance CPA's budget in 2018, following four years of deficit budgets. Prior to this announcement, our Division had directly subsidized the work of only one staff person at CPA, a Division Administrative Assistant who began assisting several divisions with communications and administrative tasks in 2016. The addition of cost allocations for other CPA staff came as a surprise to all Divisions, and required all of us to significantly restructure our budgets for 2018.

Unfortunately, the very quick turnaround time requested by CPA for budget revision meant that we were not able to circulate a revised 2018 budget to WHD members for feedback. We plan to circulate a revised budget to you in the near future, and to ask for your feedback regarding our financial planning in light of the increased operating costs now facing all Divisions. I apologize for the fact that you are only now learning of these funding changes, and that you did not have an opportunity to provide feedback earlier in our budget revision process.

If you have questions or comments regarding recent changes to Division funding, I encourage you to reach out to CPA's board of directors. As always, thank you for your ongoing engagement & support.

Wishing you all a cozy autumn,

Jesse Robson, PT

IN THIS ISSUE

Canadian Physiotherapy Association

Fall season upon us…

Hello dear readers and colleagues, and welcome to Fall… Hopefully you are enjoying this wonderful season, filled with beautiful colours and fresh breezes!

The edition you are about to read is "All about the base"… As we are approaching the season when people start falling on their behinds due to the slippery ground, we thought it would be a good preparation for us as pelvic floor physiotherapists to refresh our knowledge about the coccyx. We discuss the definition of coccydynia (or lack thereof), present practical knowledge from the wonderful Stephanie Prendergast and Britt Van Hees, provide you with some research updates, and finally a poster presenting an external mobilization technique. This issue is full of information from head to tail, and we hope you will benefit from and enjoy the read.

If there is a topic or a questions you would be interested in seeing addressed in the WHD Newsletter, we would love to hear from you!

Sincerely,

Katerina Miller, BSc Psych., MSc PT
whdnewsletter@gmail.com

The Women's Health Division (WHD) is happy to announce our 4TH ANNUAL CPA WHD Valentine's Day Challenge!

On February 14, 2018 PT students across the country will be organizing a collection drive for new, unused toiletries, feminine hygiene products, and incontinence supplies for local women's centers. This year, we would also like to invite practicing women's health PTs to join the challenge! We're currently recruiting PT students and clinicians who would like to represent their school/workplace for the challenge.

If you are interested, feel free to contact **Kiera McDuff** at **whdstudentrep@gmail.com** for more information. It's a great opportunity to get involved with the WHD and give back to your community!

COCCYDYNIA TERMINOLOGY

Stéphanie Bernard, M.Sc. PT Ph.D. candidate, Université Laval

There are many reasons to encourage the use of standardized terminology when describing symptoms and clinical signs observed with a patient. Using the most appropriate terminology with your patients or with other health professionals not only eases communication between you by decreasing the risk of any ambiguity, but the added precision may also facilitate the diagnostic process by leading directly towards the most appropriate investigations. Using the right word to describe what you are hearing and seeing clinically might not always be an easy task to do. It seems it may be especially difficult when describing symptoms or clinical signs related to the coccyx area as few references on terminology can be found. I began my search in the glossary of terminology by the Standardization Steering Committee of the International Continence Society (ICS), which is a useful list of terms and their description in functional urology (see https://www.ics.org/terminology). I was surprised to find that there was no definition of a symptom or a syndrome describing pain in the coccyx area. The closest I found was "Pelvic pain: the complaint of pain perceived to arise in the pelvis, not associated with symptoms suggestive of lower urinary tract, sexual, bowel or gynecological dysfunction. It is less well-defined than the above types of localized pain (Haylen et al. 2010)". You will probably agree with me that "pelvic pain" is a very unspecific, or unsatisfactory, term to describe the symptoms of someone with pain in the coccyx area. I scanned through many other documents of reference for the terminology of symptoms and signs relative to pelvic floor function (I listed the most interesting ones in the reference list for you to consult if you wish) [1, 2] and I was astonished to see that coccydynia, or any other similar term, is not a detailed term anywhere in these.

It was looking through a joint report on the terminology for female anorectal dysfunction by Sultan et al. (2017) when I encountered two short descriptions where the coccyx was mentioned [3]:

- Anorectal pain symptoms: refers to pain localized to the anorectal region, and may include pain, pressure, or discomfort in the region of the rectum, sacrum, and coccyx that may be associated with pain in the gluteal region and thighs.
- Levator ani syndrome: Episodic rectal pain caused by spasm of the levator ani muscle. Proctalgia fugax (fleeting pain in the rectum) and coccydynia (pain in the coccygeal region) are variants of levator ani syndrome.

The first term described by Sultan et al is for a symptom, and according to the authors, pain in the coccyx area would rather fit under "anorectal pain" than be a term on its own. The second term is used for posing a diagnosis, and again, coccydynia is not presented as a separate, unique term.

The second document where I found a little bit more description on coccydynia was by Doggweiler et al (2017) where terms related to chronic pelvic pain are reviewed. [4] Pain in the coccyx area was not only identified by the authors, but is also classified into a clinical domain for pain:

- Coccyx Pain Syndrome: complaint of chronic or recurrent pain in the coccyx or sacro-coccygeal joint. Part of the Musculoskeletal Domain: musculoskeletal pain may originate from muscles, fascia, ligaments, joints, or bones.

Although this term and its description appears more precise, it is not obvious from this paper how the term Coccyx Pain Syndrome is useful clinically. As the term "Coccyx Pain Syndrome" is listed as a symptom, and that generally a "Syndrome" is constituted by a few symptoms together, the reader remains uncertain in which situations this Term may be used correctly.

Why is pain in the coccyx area, a rather symptom that is frequently heard in both pelvic health and orthopedics physical therapy practice, is virtually absent from the terminology reference documentation? Is it because we have trouble fitting this pain into any specific topic that will be studied by the many Committees working on Standardization? Does it fit with anorectal disorders amongst fecal incontinence and constipation? Or with pelvic pain and vulvodynia? It seems coccydynia is a little bit of a misfit when it comes to grouping it with other similar Terms. It is however important that precise description of Terms relative to the symptoms, the signs and the diagnosis of coccydynia become available to clinicians in order to facilitate the management of this condition.

References:

1. Haylen, B.T., et al., An International Urogynecological Association (IUGA)/International Continence Society (ICS) joint report on the terminology for female pelvic floor dysfunction. Neurourol Urodyn 2010; 29(1): 4-20.
2. Bo, K., et al., An International Urogynecological Association (IUGA)/International Continence Society (ICS) joint report on the terminology for the conservative and nonpharmacological management of female pelvic floor dysfunction. Int Urogynecol J 2017; 28(2): 191-213.
3. Sultan, A.H., et al., An International Urogynecological Association (IUGA)/International Continence Society (ICS) joint report on the terminology for female anorectal dysfunction. Int Urogynecol J 2017; 28(1): 5-31.
4. Doggweiler, R., et al., A standard for terminology in chronic pelvic pain syndromes: A report from the chronic pelvic pain working group of the international continence society. Neurourol Urodyn 2017; 36(4): 984-1008.

COCCYDYNIA IN PRACTICE

Leslie Spohr BSc, MScPT WHD Newsletter Subcommittee

As pelvic health therapists we know how debilitating and annoying a pain in one's butt (read 'tail') can be. We also know how tricky it can be to treat when conclusions like this have been made "Due to the dearth of research available and the low levels of evidence in the published studies that were located we are unable to recommend the most effective conservative intervention for the treatment of coccydynia. Additional research is needed regarding the treatment for this painful condition."

(Ref: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3822321/)

Yes that conclusion was made 4 years ago and yes recent research has given us more to think about in regards to manual therapy, postural correction and extracorporeal shockwave therapy (ESWT). That's why we also contacted 2 physical therapists at Pelvic Health and Rehabilitation Center to answer some other questions regarding coccydynia and treatment options.

Despite the fact that they were both attending the 3rd World Congress on Abdominal and Pelvic Pain at the time we requested to interview them, they gratefully responded to our questions. Here's what they had to share – thank you so much Stephanie and Britt!

STEPHANIE PRENDERGAST

Stephanie is cofounder of the Pelvic Health and Rehabilitation Center which has locations in The SF Bay Area, Los Angels, and Boston. She currently treats patients in LA. She is co-author of Pelvic Pain Explained and a Past-President of the International Pelvic Pain Society. You can find her on twitter via @PelvicHealth.

WHAT MADE YOU WANT TO BECOME A PELVIC FLOOR PHYSIOTHERAPIST?

I was attracted to the amount of medically diverse information that pelvic floor PTs need to have to do their jobs. Pelvic health spans so many disciplines, I appreciate the fact that our field encompasses a number of areas in addition to biomechanics.

WHAT DO YOU FIND IS THE MOST CHALLENGING ASPECT OF THIS PRACTICE (PELVIC FLOOR, BUT SPECIFICALLY COCCYGEAL PAIN)?

People have coccyx pain for a number of reasons, this symptom is rarely a function of one static impairment but often a factor of a number of static and dynamic impairments, the assessment and differential diagnosis is key to successful treatment. This information can take a number of visits to discover and often assessments need to be revised if the person is not responding to or cannot tolerate treatment.

On the medical side, evidence shows that early medical intervention such as a single corticosteroid injection can be helpful in the first three months. Patients rarely get diagnosed this quickley which closes the window on this therapeutic option.

HOW DO YOU APPROACH COCCYX PAIN?

I start with a thorough history first, this will help me determine which structures I should evaluate first. Sometimes I suspect soft tissue and pelvic floor issues, other times the symptoms may seem more joint-related. Each patient is different.

WHAT ARE SOME OF THE MOST COMMON CAUSES OF COCCYX PAIN THAT PRESENT IN YOUR CASELOAD?

Traumatic injuries during vaginal deliveries, insidious development of tailbone pain over time and often following the onset of other types of pelvic pain, younger athletes and gymnasts.

HOW DO YOU HELP PATIENTS COPE WITH THE DIFFICULTY OF SITTING, GIVEN THAT SITTING IS SO PREVALENT IN TODAY'S SOCIETY?

We encourage temporary lifestyle modifications that can include specific cushions, varying positions between sitting, standing, and sitting on a gym ball, and noting it is ok to initially sit with 'less than perfect' posture until we can make enough physical changes that their functional sitting improves.

DO YOU RECOMMEND COCCYX CUSHIONS AT ALL? IF SO, DO YOU HAVE SPECIFIC ONES YOU RECOMMEND?

It depends on the person's impairments but we generally find one that works in our stash: gardening foam cut-outs, Tush Cush, Cushion your Assets, the backtivator (great for travel), the RoHo or versions of it.

WOULD YOU COMMENT ON THE ROLE THAT THE GASTRO-INTESTINAL TRACT PLAYS ON COCCYX PAIN, IF YOU FEEL THAT THERE IS ONE?

When involved, yes.

ARE THERE ANY "GO-TO" EXERCISES YOU RECOMMEND? ARE THERE ANY "MAINTENANCE" EXERCISES YOU RECOMMEND TO DO DURING PREGNANCY TO PREVENT COCCYX PAIN?

Unfortunately this is a tough question because each case is so different. Generally speaking, the obturator internus can refer pain to the coccyx so it is important to keep the short hip external rotators of normal length and free of trigger points. All humans can use a foam roller to help out these muscles. If a person has other forms of pelvic pain and tailbone pain together the foam roller for the hips and pelvic floor drops should be included in the treatment plan. In general, it is best to keep all

muscles of the pelvic girdle free of tension and trigger points and to shift or get up if pain is escalating. Since 'sitting is the new smoking' many people are using standing desk options and these are a great way to avoid static prolonged postures.

IF OTHER PHYSIOTHERAPIST WOULD LIKE TO FURTHER THEIR KNOWLEDGE ABOUT COCCYX PAIN, ARE THERE COURSES THAT YOU WOULD RECOMMEND?

IS THERE ANYTHING ELSE YOU'D LIKE TO SAY ABOUT (TREATING) COCCYX PAIN OR TO THOSE TREATING IT?

It is a complex structure and treatments vary, as do the skills of the provider. If providers are 'stuck' in a treatment plan, ask another provider. We are fortunate to have Britt Van Hees on our team, she has a particular interest in coccyx pain and has taught us new things. Find your Britt and try to get the treatment plan unstuck!

Thank you for taking time to share you knowledge with us.

BRITT VAN HEES, PT

Britt Van Hees, PT, received her Doctor of Physical Therapy from Samuel Merritt University. Britt specializes in both orthopedic and pelvic floor physical therapy. In 2017 became a Certified Functional Manual Therapist with the Institute of Physical Art, passing with honors. When not working with patients, Britt teaches in Samuel Merritt University's DPT program as an Adjunct Faculty member in their orthopedic, cardiopulmonary, anatomy lab and pelvic health curriculum. Britt is always involved in learning, whether it is developing coursework for higher education, teaching patients about their bodies, or attending conferences on best practices and treatment. She enjoys working alongside patients, developing their understanding and ownership of functional movements. Britt believes that when patients have true ownership, they can make lasting and meaningful change. When Britt is not treating or teaching she enjoys spending time hiking, dancing, traveling and having tea with friends.

WHAT MADE YOU WANT TO BECOME A PELVIC FLOOR PHYSIOTHERAPIST?

Prior to becoming a physiotherapist I spent several years as a pilates instructor with particular emphasis on the 'core' and the pelvic floor. Upon entering my doctoral program, I was excited to learn more about the pelvic floor, only to realize that, like most PT programs, little time was given to it. Then again, after working as an orthopedic physiotherapist, the pelvic floor seemed to be at best, an unknown entity, or at worst, unimportant. I decided to become a pelvic floor physiotherapist to learn its role and integrate it into patient care.

WHAT DO YOU FIND IS THE MOST CHALLENGING ASPECT OF THIS PRACTICE (PELVIC FLOOR, BUT SPECIFICALLY COCCYGEAL PAIN)?

There are two challenging aspects that play off each other in pelvic floor or coccyx dysfunction. One is its location, the second is its multiple roles in the body. The "down there" location of the the pelvic floor and coccyx make it difficult for some patients and even medical practitioners to accurately assess symptoms. Often there is shame and fear with these symptoms which muddies the water for the medical practitioners and can even increase a patient's pain response. This essentially leads to less understanding about the pelvic floor and slower rehabilitation. Now, compile the taboo location with the fact that a lot goes on "down there." The pelvic floor and coccyx have roles in bowel, bladder, sexual, reproduction, posture, 'core', lymphatic and hormonal function. The coccyx itself also is connected to the neurofascial system via the filum terminale and viscerofascial system via the endopelvic fascia and pelvic floor itself. The most challenging aspect of pelvic floor practice is there are a number of factors that can impact the pelvic floor and coccyx, and the reduced awareness of this area, by both medical practitioners and patients, leads to failed treatment. Essentially, it's easy to miss something, especially when you don't want to look at it.

HOW DO YOU APPROACH COCCYX PAIN?

This goes along with my prior answer. It's really the same way I would look at any dysfunction or impairment: taking a full history, looking at all the impacts it has on other systems and vice versa, understanding the patient's perspective on his/her coccyx pain, its impact on daily activities, location of pain (sometimes it's not their coccyx that is painful but a pelvic floor muscle) etc. What I have found really important for coccyx pain, is the mechanism of injury (MOI). If there isn't a direct fall to the coccyx it may lead me down other roads to discover why the body is registering pain there.

WHAT ARE SOME OF THE MOST COMMON CAUSES OF COCCYX PAIN THAT PRESENT IN YOUR CASELOAD?

Some straight forward causes can be recent/past falls or trauma during child birth. This can lead to hypo/hypermobilities of the intercoccygeal or sacrococcygegal joints. The pain can be due to the joint itself, or the pelvic floor muscle attachment to the coccyx. A patient may have a coccyx pain due to a hypertonus pelvic floor, either the biomechanical pull or a referral from the levator ani or internal obturator. Then you have to figure out why it's hypertonus, i.e. constipation, hormonal factors, habit patterns, etc. The connective tissue external to the coccyx can be a culprit, though I find it more of a secondary response to the pain than a primary cause, but still very helpful to treat. I also have worked with patients who have significant restrictions in their neurofascial system, i.e. neural tension/neurodynamic testing recreates their coccyx pain. These patients tend to have very odd mechanism of injury, flipping her head over while blow drying her hair, laying sideways on a couch for multiple days on a couch while suffering from shingles, something that may indicate a stress to the nervous system.

HOW DO YOU HELP PATIENTS COPE WITH THE DIFFICULTY OF SITTING, GIVEN THAT SITTING IS SO PREVALENT IN TODAY'S SOCIETY?

This is another big reason why coccyx pain is so limiting, sitting is such an important part of our daily activities. I like to check to see how and on what the patient is sitting. Often they are in an excessive lordotic or kyphotic position in the lumbar spine. Both of these positions place extra strain on the pelvic floor and thus the coccyx via its attachment. Having patients learn to sit on the pelvic floor, just slightly tipped forward of their ischial tuberosities with a neutral spine, on a good chair can help reduce the the intensity of pain or eliminate it entirely. Also, making modifications to work stations, changing chairs, using cushions or sit-stand desk can sometimes be helpful.

DO YOU RECOMMEND COCCYX CUSHIONS AT ALL? IF SO, DO YOU HAVE SPECIFIC ONES YOU RECOMMEND?

Sometimes I recommend coccyx cushions, though it's not my first place I go for coccyx pain. I prefer patients to first learn how to sit and how to modify their chairs. Then once they have that knowledge, they can pick a good cushion that fits their needs. Often the ones with the cutout in the back can be helpful, though ideally the patient should not be weight bearing on their coccyx anyway. Some patients prefer hard surfaces, so in this case a cushion may not be appropriate. For generalized pelvic floor discomfort, I like the Therarest inflatable seats for easy travel.

WOULD YOU COMMENT ON THE ROLE THAT THE GASTRO-INTESTINAL TRACT PLAYS ON COCCYX PAIN, IF YOU FEEL THAT THERE IS ONE?

The greatest role I've seen is when the patient reports constipation. If the bowel does not empty daily and easily with soft smooth stool then the pelvic floor needs to hold onto the fecal matter for longer, increasing muscle tone and strain to the coccyx. Patient may report bowel movements as an aggravating factor, or they may not. Sometimes, an inflammatory response of the gut, i.e. food sensitivities, may lead to an overall increased inflammatory response of the body, including coccygeal region. Sufficient water intake, diet assessment, proper bowel mechanics (i.e. squatty potty without straining) or other digestive aids can be helpful in these cases. In my experience the gastro-intestinal tract has not been a primary driver to coccyx pain, but addressing it can reduce exacerbation in some instances.

ARE THERE ANY "GO-TO" EXERCISES YOU RECOMMEND? ARE THERE ANY "MAINTENANCE" EXERCISES YOU RECOMMEND TO DO DURING PREGNANCY TO PREVENT COCCYX PAIN?

For women who are pregnant, they may benefit from SIJ belt depending on when their coccyx pain started, i.e. if it is later in their pregnancy the load of the baby and increased laxity of their joints may be leading to increased stress on the pelvic floor muscles. Offloading the muscles by approximating the SIJ may reduce the coccyx pain. It really depends on the MOI for pregnant women.

It's generally difficult to develop exercises specific for the coccyx, most of the time I prescribe mobility for the pelvis, spine and pelvic floor. Some examples would be, pelvic floor relaxation/drop, cat/cow, child's pose, pelvic clocks, etc. Of course all of these things should be done without pain.

If someone has a hypermobile coccyx along with SIJ hypermobility, I may train their hip rotators in prone. However, I need to be certain that the patient has low pelvic floor and obturator tone, as it can aggravate someone with coccyx pain referred from an obturator spasm.

IF OTHER PHYSIOTHERAPIST WOULD LIKE TO FURTHER THEIR KNOWLEDGE ABOUT COCCYX PAIN, ARE THERE COURSES THAT YOU WOULD RECOMMEND?

Most of my training is through the Institute of Physical Art. I recommend all their classes, but to get a good introduction to coccyx treatment their visceral course provides some immediate hands-on training. Herman and Wallace also has some courses, however, they tend to be more indirect in nature. Both techniques are helpful in order to have multiple skill sets to work with your patients. Also, feel free to check out the PHRC blog for some more background info about the coccyx.

IS THERE ANYTHING ELSE YOU'D LIKE TO SAY ABOUT (TREATING) COCCYX PAIN OR TO THOSE TREATING IT?

One treatment note: there is the sympathetic ganglion of Walther at the sacrococcygeal junction. Occasionally patients will remark that they feel nauseas or "woozy" during treatment. If this is the case, I go slow to determine what is tolerable to the patient. Sometimes this limits my treatment, but usually it does not. I like to obtain informed consent from the patient regarding this, letting them know this is a common response and not to be concerned, but they may need to take it slow that day. I explain what I'm going to do, as I would with any treatment.

One encouraging note: I would say that physiotherapists fall into two camps when considering the coccyx. Either they think the coccyx is unimportant or they are so intimidated by it they don't know what to do. For the former, I say consider all its attachments to the pelvic floor, to the sacrum, to the nervous system, to the surrounding fascia- try treating it and see what changes you make. For the latter, remember it functions like any other joint in our body. There is often a sacrococcygeal disc. It can move like a joint, flexing, extending, rotating, sidebending, though perhaps to a lesser extent than the hip joint. And, as a pelvic floor physiotherapist you get to be up close and personal with it to figure out exactly what is going on. How many joints can you do that with? So don't be afraid, go for it.

Thank you for taking time to share your knowledge with us. ☺

Coccydynia – What has 2017 Taught Us?

By Katie Kelly, PT, Member of the Newsletter Subcommittee

For such a small area, the coccyx can certainly cause a lot of problems. Exquisite pain in the tail bone with sitting, upon standing and during bowel movements are a few of the hallmarks of coccydynia. While pain in the tailbone is a common enough complaint, we continue to lack real data of its incidence. For those suffering from coccydynia, management ranges from counselling about coccyx cushions and sitting postures, to anti-inflammatory use, a myriad of injections or possibly the surgical excision of the coccyx itself. Alternatively, some patients are told that they can't be helped.

More recently, physiotherapists have been tackling tail bone pain. Given the suspected role of the pelvic floor muscles, joint mobility and connective tissue involvement, physiotherapy seems a good choice for conservative management. However, the chronicity of the problem, variety in symptom presentation and lack of clinical practise guidelines seems to make rehabilitation challenging for physiotherapists, this writer included.

Past research has investigated manual techniques focused on joint mobilization of the coccyx. However, when compared to soft tissue techniques (massage of the levator ani and coccygeus muscles) the soft tissue techniques fared slightly better.[1] The latest research published over this last year investigates the treatment of coccydynia with pelvic floor muscle relaxation, pelvic and hip stretches and extracorporeal shock wave therapy.

Perhaps the study that best demonstrates comprehensive pelvic floor physiotherapy treatment was done by Kelly et al.[2] This study hypothesizes that pelvic floor muscle pain associated with hypertonic muscles may be a cause of coccydynia. Ninety-three participants with chronic coccydynia or post-coccygectomy pain participated in weekly, hour long pelvic floor physiotherapy treatments. Following an initial exam, treatments were individually tailored and used techniques to lengthen and relax pelvic floor muscles, improve fascial connective tissue, and optimize lumbosacral posture. Participants were also given personalized home exercises focusing on diaphragmatic breathing, reverse Kegels, stretching, posture retraining and the use of vaginal/anal dilators. Treatment excluded any Kegel exercises, electrical stimulation and coccyx mobilization. Results demonstrated that 62% of participants achieved a 60% reduction in their pain, as rated by the Numerical Pain Rating Scale (NPRS). This is a finding that has seemingly not been achieved previously and boasts both statistical and clinical significance. It further supports the theory that coccydynia, at least in some patients, is largely affected by pelvic floor muscle overactivity.

Mohanty and Pattnaik investigated the effects of improving posture as a means of reducing coccydynia.[3] They proposed that an overly tight piriformis contributes to sacral rotation and overly tight iliopsoas muscles contribute to an anterior rotated pelvic position. They also reason that greater thoracic kyphosis encourages increased lumbosacral flexion which increases coccyx loading in sitting. Forty-eight subjects were randomly assigned to one of three treatments: piriformis and iliopsoas stretches (group 1), piriformis and iliopsoas stretches and Maitland's thoracic mobilization technique (group 2), or conventional treatment with coccyx cushion, sitz bath and phonophoresis (group 3). Experimental treatment sessions were performed 5 days/week for 3 weeks. Both experimental groups demonstrated significantly improved pain levels and tolerance for pain-free sitting by treatments end and at 1 month follow-up, though neither was significantly greater than the other. This is suggestive that by optimizing pelvic posture through pelvis and hip stretches coccydynia symptoms may be improved.

Finally, a small but growing body of research has been investigating extracorporeal shock wave therapy (ESWT) for the treatment of coccydynia. Marwan et al [4] rationalize that coccydynia, for a variety of reasons, promotes a continued inflammatory response to the coccyx and local soft tissue. Therefore, they theorized that ESWT will help with the neovascularization of this area and potentially reduce pain.

They recruited twenty-three people with coccydynia and treated them with 3 weekly sessions of shockwave therapy. Three-thousand waves of 0.2 mJ/mm2 were aimed over the most tender aspect of the coccyx. Outcomes assessed were the NPRS and Oswestry disability index (ODI) before treatment, one week, four weeks, three months and six months following treatment. Six of the participants chose not to complete the course of treatment due to lack of improvement, otherwise the protocol seemed well tolerated without complication. Of the remaining participants, 74% reported a partial pain reduction. They also experienced a significant reduction in ODI scores. While there were admittedly limitations to this case series, it does support previous findings related to coccydynia and ESWT.

It should be emphasized that as of January 2017, the FDA had not approved ESWT for coccydynia and the treatment is to be considered experimental.

While we continue to lack sufficient information to produce clear practice guidelines, 2017 certainly added to our growing body of knowledge. I am happy to see a study investigate a more comprehensive treatment plan aimed at pelvic floor muscle relaxation. I am also encouraged that familiar hip stretches may reduce stress on the tailbone. And finally, I am optimistic that researchers will continue to investigate the role of modalities in the coccydynia population. Hopefully these studies serve as food for

thought when considering your own coccydynia treatment plans, and maybe even inspire a few of you to further the research in this area.

References:

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3. Mohanty, P. P., & Pattnaik, M. (2017). Effect of stretching of piriformis and iliopsoas in coccydynia. Journal of Bodywork and Movement Therapies.
4. Marwan, Y., Dahrab, B., Esmaeel, A., Ibrahim, S. A., & Al-Failakawi, J. (2017). Extracorporeal shock wave therapy for the treatment of coccydynia: a series of 23 cases. European Journal of Orthopaedic Surgery & Traumatology, 27(5), 591-598.

A series of casestudies on patients with chronic pain in the coccyx is published as a Master-thesis report by Roel Stupers. Roel described a high successrate of the tested protocol: 50% of patients experienced significant reduction of symptoms within 6 weeks, only 3 sessions used. No side effects or exacerbation of symptoms was found in any of the studied cases. The protocol that was tested is the one we present on the poster. Further research on this technique is advised. Thank you for giving this technique the attention that it deserves.

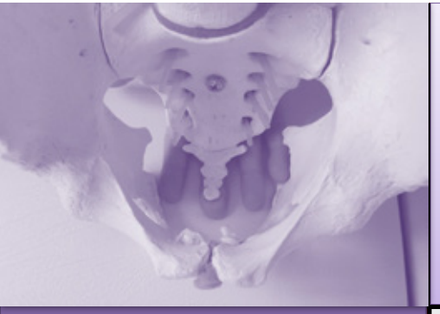
MEINE VELDMAN

Our colleague Meine Veldman is a Dutch Orthopedic Manual Therapist who devoted a great deal of his working hours to refine a manual technique on the reposition of a painful coccyx. Besides that, he successfully treated a great number of patients with pain in the coccyx with this technique and made other therapists aware of the importance of this 'forgotten bone' in their treatments of coccydynia and other related disorders.

CECILE RÖST

Cecile lives and works in Leiden, the Netherlands. She manages Centrum BTR, a paramedical centre which includes MoVeS Manual Therapy clinic and other physical therapists. Cecile's therapeutic career has been devoted to the treatment of women and children. Cecile has worked in Pakistan, Germany and in the Netherlands. She has had years of training in pediatric physiotherapy, sensory integration therapy and manual therapy, which have influenced her perspective as a professional. Cecile, from a large family with six children, initially focused her work on children with behavioral problems such as ADHD and autism.

Cecile experienced Pelvic Girdle Pain (PGP) in all three of her pregnancies. In her third pregnancy, using her own instincts rather than traditional treatment, Cecile devised exercises and postures which helped improve her own PGP. Since then, her work has acquired a different direction! Soon after childbirth, Cecile treated other pregnant and postpartum women with PGP using her own formula of exercises and therapy. She became inundated with requests for treatments from hundreds of women, both from home and abroad. Cecile then worked on research to determine effectiveness of her approach, and to discover how and why this approach worked. International publications, lectures, and many courses followed. Cecile completed her Clinical Epidemiology Masters Degree from the University of Amsterdam in 2017 with the development and validation of a new condition specific and multifactorial questionnaire: OCI-PGP (soon to be published). She will continue her career in scientific research into treatments for pelvic pain.



External correction of the coccyx bone

- A case study-

Meine Veldman, PT, Orthopedic Manual Medicine ,Bilthoven, the Netherlands
Cecile C.M. Röst PT, Orthopedic Manual Medicine, Leiden, the Netherlands

ABSTRACT

Introduction: Coccydynia is often associated with a malalignment of the coccyx and changes in the musculo-visceral system are often found in these patients. Therefore, the writers believe evaluation of the patient's complaints must include assessment of the articular, myofascial and visceral systems. Currently, correction of coccyx malalignment is usually achieved through internal treatment by a pelvic floor therapist; however, this poster presents an external treatment technique that can be performed by manual therapists.

Description: This case study followed a patient with chronic coccydynia from onset of symptoms to three months after the start of the physiotherapy treatment. The outcomes of the assessment, including history of trauma, treatment and follow up, by use of questionnaires and visual analogue scales, is being presented.

Purpose: To present an effective therapeutic tool to manual therapists that is easy to perform and very patient friendly.

Relevance: Chronic coccydynia can greatly impact a patient's daily life.

Evaluation: VAS score was reduced by 50% after the first treatment session and at three weeks follow-up. At two month follow-up the VAS was reduced and the Québec Back Pain Disability Scale score was reduced by 50% from intake score.

Conclusions: Despite the long-term nature of this patient's coccyx pain, this manual external treatment was effective in relieving symptoms. Manual therapists can use a simple, efficient, external technique to correct coccyx malalignment in patients with coccydynia.

Implications: Effective treatment is still possible after many years of chronic coccydynia

PATIENT

Miss Z., 15 years old, attends middle school. Sports : hockey
5 years of significant pain in her pelvis and lumbar spine. VAS 8.
Quebec score 50/100. Daily use of maximum doses of Paracetamol and Ibuprofen

HISTORY

January 2007, Miss Z. is 10 years old: Fall down the stairs onto coccyx and lower back. Slight nausea, but no other complaints. One month later: onset of symptoms.
GP > poor posture > 12 x training sessions with **therapist** followed. Goal was to improve pelvic control and reduce lumbar lordosis. No improvement, complaints stay the same.

September – November 2009: hockey and swimming too painful > **GP** > lumbar lordosis causes complaints > new training episode > no improvement > **x-ray** taken> innominate height difference > **GP** > bowel disorder causes pain > prescribes **purgatives and orthopedic doctor** > leg length difference >orthotics>no improvement > weekly sessions of painful high velocity thrust **manipulations** followed > no improvement and too much back pain to be active in sports again >maximum doses of **paracetamol and ibuprofen**, no physical activities up to 2012.

November 2011 > **GP** > 12 x **training** for better posture > **no improvement**

EXAMINATION

In 2012 Meine Veldman examined Miss Z. The pain was located bilateral at the base and ILA of the sacrum. The coccyx was malaligned with the caudal aspect deviated to the left and a compensatory left side flexed left rotated sacrum and a C scoliosis of the lumbar spine, convex to the left.

TREATMENT

First treatment (see photos): Patient is sitting on the short side of the table. The patient crosses the arms. The therapist moves the patient 's trunk ventrally. The therapist brings phalanx 3 and 4 (or just 3) under the coccyx bone and fixes it.
The therapist left side bends the patient's thoracic spine which shifts the patient's body to the right. The therapist then rotates the patient's thorax to the right.
The patient's body is brought back to starting position and the motion is checked by a repeated side shift to the right with a left side bend of the thoracic spine. The patient is then brought back to starting position and the treatment is finished.
Second treatment: any rotational malpositions of the sacrum are corrected and malalignment of the coccyx is checked.
Third treatment: Hypertonic muscles are relaxed by stretching and/or dry needling.

FOLLOW-UP

After correction of the coccyx using the described treatment, the pain was reduced with the VAS-score to 4/10 , after 3 weeks 3/10, after two months 1/10, after three months 0/10. After two months, the Quebec score was 25/100, one month later it was further reduced to 15/100. Immediately after the first treatment, the lumbar spine curvatures appeared to be normal with no C scoliosis noted.

DISCUSSION AND CONCLUSION

Chronic coccydynia can greatly impact a patient's daily life as we can see from this case study. Despite the long-term nature of this patient's coccyx pain, this manual external treatment was effective in relieving her symptoms. Manual therapists can use a simple, efficient, external technique to correct coccyx mal-alignment in patients with coccydynia. Effective treatment is still possible after many years of chronic coccydynia. Further research on this and other techniques is needed in order to find the most effective patient friendly way to alleviate symptoms of this 'pain in the tailbone'.

Biography of Meine Veldman

Meine Veldman (1953) is a Dutch Orthopaedic Manual Therapist. He started his career by treating sport professionals. For the past fifteen years he has owned two private practices in a multicultural part of Utrecht and in Bilthoven, both in the Netherlands. His special interest in treatment of the coccyx bone developed after a coincidental successful treatment of coccydynia in a tennis player. Meine took courses in visceral manipulation and became a specialist in treatment of coccydynia. On average Meine treats 40 persons with coccyx pain every month.

Biography of Cecile Röst

Cecile Röst (1961) is also a Dutch Orthopaedic Manual Therapist. She is the author of 'Relieving Pelvic Pain during and after Pregnancy' and published extensive epidemiologic studies on pelvic pain in Spine (2004) and Acta Obst. Gynaecol. Scand. (2006) . Cecile teaches her theories and treatment techniques to colleagues in the Netherlands, Belgium and Canada.
Because of the great impact coccydynia can have on daily life and the simple treatment that can successfully improve symptoms and quality of life, Cecile and Meine are cooperating in further research about this topic.

Special thanks: to our colleagues Susannah Britnell and Paula Mast, who helped in writing and building this poster.

This case report is sponsored by the Dutch Association of Orthopedic Manual Therapists (NAOMT), Cecile Röst (www.rosttherapy.com) and Meine Veldman (www.meineveldman.nl)

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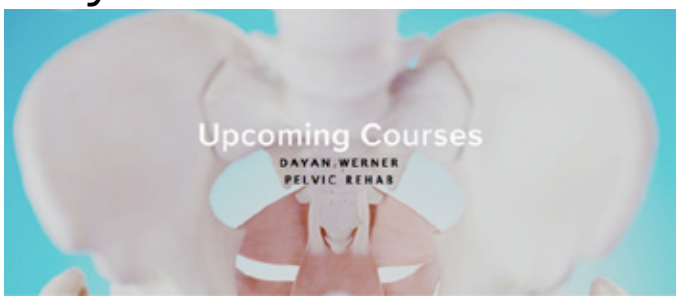

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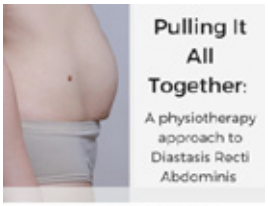

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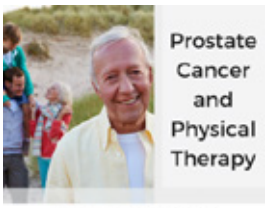

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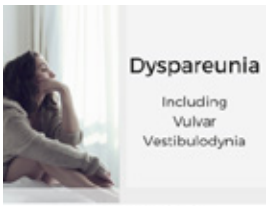

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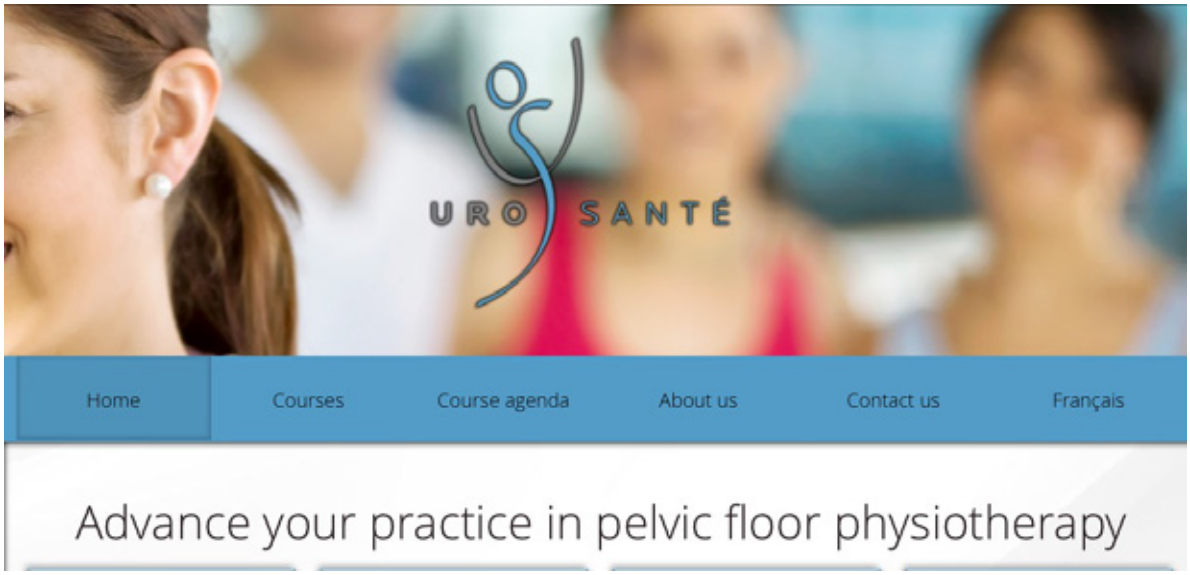

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