N National
V Vulvodynia
A Association

NVA News

Volume XVI, Issue II

Summer 2011

Vulvar Pain Resulting from Orthopedic Causes

By Deborah Coady, MD, and Nancy Fish, MSW, MPH

Dr. Deborah Coady is clinical assistant professor of obstetrics and gynecology at NYU Langone Medical Center. Her medical practice, Soho Obstetrics and Gynecology, is located in New York City. Ms. Fish is a licensed social worker with a master's degree in public health. She works part-time at Soho OB-GYN counseling patients and leads a monthly support group there. She also has a private practice in Bergen County, New Jersey.

The pelvis is enclosed by a mantle of bones and joints, any of which may be the source of sexual pain. The lumbar spine (at about waist level), the sacrum, the coccyx (tailbone), and the top of the hip bones form the back of the pelvis. The front of the pelvis is held together by the pubic bone, while the side of the pelvis is formed by pubic bones and the hip joint (see illustrations on pages 8 and 9).

If any of these structures is out of alignment, vulvar or pelvic pain can be the result. Tears or injuries in the joints and bones also can inflame the surrounding tissues, often irritating the nerves leading to the vagina and vulva. As with other types of sexual pain, we get a cascade of effects: bone or joint injury or misalignment affects muscles and tissues, which in turn affects nerves. Problems that began outside the vulva ultimately end up causing sexual pain.

What's Going On: The Biology

When any portion of our skeleton is injured, the effects radiate outward to our other bones and

See ORTHOPEDIC, page 2

NICHD Hosts Vulvodynia Researchers

In July 2011, the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD), with support from the Office of Research on Women's Health (ORWH), convened its third vulvodynia workshop, *Vulvodynia: A Chronic Pain Condition – Setting a Research Agenda*. At the conference, NICHD hosted seventy scientists, clinicians and members of organizations and agencies interested in the condition, with the overall goal of developing a strategic plan for advancing vulvodynia research.

Building on the 2003 NIH workshop, *Vulvodynia: Toward Understanding a Pain Syndrome*, this meeting

See NICHD, page 16

Orthopedic

(from page 1)

joints—as well as attached muscles and connective tissue, and then our nerves. Ultimately, we're looking at both the musculoskeletal system and the nervous system as pathways for sexual pain. Let's zero in on the specific areas of the musculoskeletal system and the types of injuries that are most likely to create sexual pain.

The Back

The nerves that supply the vulva and vagina with motor and sensory signals leave the spine from the lumbar and sacral areas as nerve roots. As a result, any problem in this part of the spine can cause sexual pain—including injuries, scoliosis, osteoarthritis, bulging disks, cysts (fluid-filled sacs arising from the small vertebral joints), or tumors. And because these nerves supply the muscles and allow muscle function, injuries here can also cause muscle changes in the pelvis, which in turn can lead to pain.

The Hips

Since the hip and pelvis share many of the same muscles, and since these muscles affect pelvic and vulvar nerves, it makes sense that sexual pain can result from hip disorders. If you've injured your hip, you've made subtle but important changes in your gait and movement to compensate for discomfort, hip instability, and mechanical impairment. This creates problems in your muscles—which may tighten, shorten, stretch, or weaken to keep your core and pelvis stable. The central nervous system subconsciously "recruits" these muscles to do this job, even though it may be inappropriate for them to behave this way. The fascia and other connective tissues are also tightened, or shortened, adding to the imbalance and discomfort. And these structures in turn pinch, press, stretch, or otherwise irritate your pelvic nerves, which send pain signals to the brain.

Here are some specific ways that hip injuries might cause sexual pain:

Labrum Tears

The hip labrum is a horseshoe-shaped ring of dense connective tissue that attaches to the bony rim of the hip socket to deepen, reinforce, and stabilize the socket, and to seal and protect the joint. Tears in this tissue (called "labrum tears") cause Femoroacetabular Impingement (see below) and also force the pelvic floor muscles to compensate by tensing and shortening, putting pressure on the pudendal nerve and thus causing sexual pain.

Femoroacetabular Impingement (FAI)

This is a common condition with two possible causes. In one, the ball (the head of the femur) rubs against or collides with the hip socket (the "acetabu-

See ORTHOPEDIC, page 3

NVA News
National Vulvodynia Association
P.O. Box 4491, Silver Spring, Md. 20914-4491
(301) 299-0775; FAX: (301) 299-3999
www.nva.org

NVA News is published three times per year.

Editor:
Phyllis Mate

Contributor: Chris Veasley **Layout:** Andrea Hall

Orthopedic

(from page 2)

lum"). When the ball and socket rub against each other, they create a bump (a "callus") that limits the hip's range of motion, especially with regard to your leg's ability to flex and rotate inward. Alternately, an outgrowth or bump on the acetabular rim might limit leg flexion and outward rotation.

Either way, we're usually looking at a vicious circle, in which these bumps create even more friction and therefore may get bigger, causing ever-greater instability and inflammation in the hip joint—and ultimately, a permanent loss of cartilage. If your cartilage is rubbed away, you're at risk for osteoarthritis. Meanwhile, the bumps or calluses throw your muscles out of balance, make movement more difficult, and frequently lead to nerve irritation and pain.

Other Orthopedic Causes

Back and hip disorders are the most common orthopedic causes of sexual pain. But a number of other, often severe conditions may also give rise to this pain. Unfortunately, most doctors are not aware of how common these conditions are among women, and how often they may lead to sexual pain.

Coccydynia: Pain in the Tailbone

This type of pain is due either to a congenital abnormality or (more often) to an acute or chronic injury that causes the tailbone to deviate—right, left, forward, or back—rather than extending straight down. The displacement causes pressure on branches of the pudendal nerve and also pulls on the pelvic floor muscles, causing muscle imbalance—which pulls even more on the coccyx, causing more pain. When you have coccydynia, deep penetration can cause excruciating pain and can also make your condition much worse.

Sacroiliac Joint Problems

The sacroiliac joints hold your back and pelvic bones together. When they're unstable—as they are in many women, due to laxity in the ligaments holding the joint together—you can suffer from pelvic floor pain. Often these joints are themselves affected by movement disorders arising from hip labrum tears and FAI. Remember, the pelvis is tightly interconnected and operates as one working unit. Tightness and discomfort in the pelvic floor may be due to the pelvic muscles' compensating for instability in the sacroiliac joints. So if a sacroiliac joint is distressed, you may feel pain anytime your pelvis moves—and particularly during the regular pelvic movement involved in sex.

Pubic-Bone Conditions

The pubic bone is vulnerable to low-grade injury in sports and other activities, and that leads to inflammation—which may spread to the pelvis, the bladder, and even the clitoris, causing sexual pain. In addition, the adductor muscles of the legs originate at the pubic bone, and if they and their tendons are injured (they may tear and swell), pu-

See ORTHOPEDIC, page 4

Christin Veasley Named NVA Executive Director

In June 2011, after 15 years as Executive Director, Phyllis Mate retired, and the NVA Board appointed Christin Veasley, formerly our Associate Executive Director, to the position. Phyllis remains President of the Board and will continue to work closely with Chris, as they have done in the past. "Since Chris started working with us in 2000 she has been an invaluable asset to the NVA, and we are confident that she is the best person for the position." said Mate.■

Orthopedic

(from page 3)

bic bone inflammation may follow. Pain from this inflammatory condition may also relay to the groin, clitoris, and urethra during sexual activity.

The front of the pelvic bones is held together in the midline by a joint called the pubic symphysis, which opens markedly with pregnancy and childbirth. Sometimes it opens too much and becomes weak and unstable, causing significant postpartum pain in response to movement—pain that might continue for months or even years if inflammation continues. This is called Osteitis Pubis.

Definition and Types of Vulvodynia

Many different terms have been used to describe vulvodynia. As a result, confusion among patients and medical professionals is common. To encourage consensus and clarify terms used in this newsletter, we have provided a brief summary of the most current definitions and classification. For more detailed information, please visit http://learnprovider.nva.org/historical_overview.htm and http://learnprovider.nva.org/terminology_classification.html.

Vulvodynia is *chronic (more than three to six months) vulvar pain without an identifiable cause.* The location, constancy and severity of the pain vary among women. The two main subtypes of vulvodynia, which sometimes co-exist, are:

Provoked Vestibulodynia (PVD)
(Previously: Vulvar Vestibulitis Syndrome)
Women with PVD have pain limited to the vestibule, the area surrounding the opening of the vagina, that occurs during/after touch or pressure, e.g., with intercourse, tampon insertion and/or prolonged sitting. PVD is further classified as *primary (pain since the first attempt at vaginal penetration)* or *secondary (pain that starts after a period of pain-free vaginal penetration*).

Generalized Unprovoked Vulvodynia (GV)
(Previously: Dysesthetic or Essential Vulvodynia)
Women with GV have spontaneous pain in multiple areas of the vulva. It is relatively constant, but there can be some periods of symptom relief. Activities that apply pressure to the vulva, such as prolonged sitting or simply wearing pants, typically exacerbate symptoms.

Iliopsoas Conjoined Tendon Pain and Bursitis
The long psoas muscle is a major core and hip stabilizer and flexor that runs behind the pelvic organs and combines with the iliacus muscle in the pelvis to form the iliopsoas conjoined tendon, as seen in illustrations on pages 8 and 9. These muscles and their tendon connect the front of the bones of the spine to the hip bones. Injuries, hip disorders, and back problems can cause this structure to become inflamed, tight, or shortened—making it unable to do its work easily.

As with other pelvic conditions, an inflamed iliopsoas conjoined tendon can affect related nerves, such as the genitofemoral, which supplies part of the vulva's sensation. When disordered, this nerve transmits pain signals to the brain during sex. In addition, psoas muscle pain can be confused with endometriosis pain, since it has a similar location in the pelvis.

Other vulnerable areas around the iliopsoas conjoined tendon are bursas—fluid-filled sacs that work to counteract tension and friction at joints and tendons. If they become inflamed, however, bursas around the iliopsoas conjoined tendon or at the outer hip can create severe pain in the groin and vulva—this is called bursitis.

Ischial-Tuberosity Problems
The ischial tuberosities—the "sit bones"—are the

See ORTHOPEDIC, page 6

Orthopedic

(from page 4)

bottommost bones of the pelvis. We put a lot of pressure on them with long hours of sitting (which our bodies are not designed to do), and they're vulnerable to chronic injury from falls and other traumas—including those caused by long-distance biking and other vigorous activities. Hip disorders can also involve the ligaments inserting into the sit bones. Since the pudendal nerve runs right behind the bones and ligaments, inflammation here can create significant pudendal nerve irritation, and thus sexual pain.

Osteoarthritis

Osteoarthritis is a common inflammation of joints. Pain and stiffness from osteoarthritis may limit movement in parts of your body that are involved in sexual activity, such as your hips, back, neck, and hands. It may be the most frequent cause of sexual pain, especially as we get older.

Symptoms of Orthopedic Problems

Clitoral or deep rectal pain and/or itching when sitting

Deep, sharp pain in the vagina during penetration, usually on one side

Stiffness in the legs, back, and/or hips in sexual positions

Uncomfortable clicking of the hip, back, or groin when moving

In certain positions, sharp, radiating pain to the outer thigh, sometimes down to the knee, foot, groin, or buttock

Inability to sleep on a particular side due to pain

Diagnosis: The Tests You Need

Diagnosing orthopedic injuries and disorders is often relatively straightforward, but what is not so clear is the link between these problems and sexual pain. Fortunately, a much better understanding of the links between hip and back and pelvic floor is emerging, and more doctors are beginning to see that fixing the "unhappy" hip or back does often reduce sexual pain, or even make it go away. But unfortunately, curing orthopedic pain is not a quick fix, because it takes time to get your core strong and in balance again. For these often somewhat mysterious or confusing orthopedic conditions, your physician should be working with a team of experts, since no single physician can know or do it all.

<u>The Basics</u>

Your doctor's first step should be to take a detailed history from you. This is always an important part of diagnosing sexual pain, but it is particularly so with orthopedic causes, since a certain amount of detective work is needed to identify the initial injury. In fact, taking a good history may be more important than any test. Often, orthopedic pain does not seem to stem from any trauma. However, sports or other injuries can suggest orthopedic problems, as can lifestyle—such as a pattern of prolonged sitting, dancing, or other types of vigorous or repetitive movements. Infancy and early-childhood hip problems are also risk factors for adult hip problems. Hip discomfort at any time, present or past, might also be clues to orthopedic problems.

A detailed physical exam will also be very helpful. Your doctor should observe your gait, as a high percentage of women with orthopedic problems walk with a mild intermittent limp. Have your doctor

See ORTHOPEDIC, page 7

Orthopedic

(from page 6)

evaluate your hips and back in standing position as he or she looks for tenderness, asymmetry, deformity, and scoliosis (curvature of the spine).

Diagnosing Hip Injuries

We have at our disposal a number of physical-exam maneuvers to see if the hips are "unhappy." The easiest of these include: the FABER (Flexion, ABduction, External Rotation) test, used to identify decreased rotation or pain when the hip rotates outward; the flexion–internal rotation–adduction impingement test, used to identify decreased rotation or pain when the hip rotates inward; and palpation of the greater trochanter (the outer part of the hip), which looks for tenderness and bursa problems.

Your doctor should also conduct a careful pelvic exam, with special attention to the hip-related anatomy. During the vaginal and rectal exams, your doctor should assess the obturator internus muscle, a primary hip rotator. We have found that this muscle bears a lot of strain when the hip is weak, unstable, or impinged and off-balance. It attaches to the other pelvic floor muscles and may greatly affect them. When we examine the obturator internus, hip and potential pelvic floor problems are often indicated by the following symptoms: tenderness, tension, tight bands; an increase in resting tone; asymmetry between right and left sides; or hypertrophy (overgrowth) or atrophy (shrinking).

Your physician should also test the pudendal nerve at the sacrospinous ligament complex at the ischial spine (see this landmark in illustration on page 8). When touched gently with an examining finger, a distressed nerve will respond with pain, often radiating to or referred to another part of the pelvis—or even to the hip or buttocks.

If your history and your response to this type of pelvic exam suggest hip problems, your doctor may proceed to imaging studies: x-rays, ultrasounds, MRIs, or CT scans (though we try to avoid the latter because of radiation). Your doctor may choose a

Symptoms of Back Disorders

Numbness in the vagina during penetration

Bladder and bowel problems

Burning pain that worsens in certain sexual positions

Sciatic pain, which radiates down the back of a leg

Tingling sensations in the groin or lower abdomen (if nerve roots from higher up are involved)

Symptoms of a Hip Problem

Insidious pain in the front part of the hip and in the lower quadrant of your abdomen, as well as groin pain, which may radiate to the thigh or knee

Decreased range of hip motion as a result of pain and/or impingement

Dull or sharp, constant or intermittent pain in the hip, often with clicking, pinching, and/or locking

Pain that gets worse with activity, with prolonged sitting, when rising from a seated position, or when climbing stairs

Very weak gluteal muscles

See ORTHOPEDIC, page 9

Orthopedic

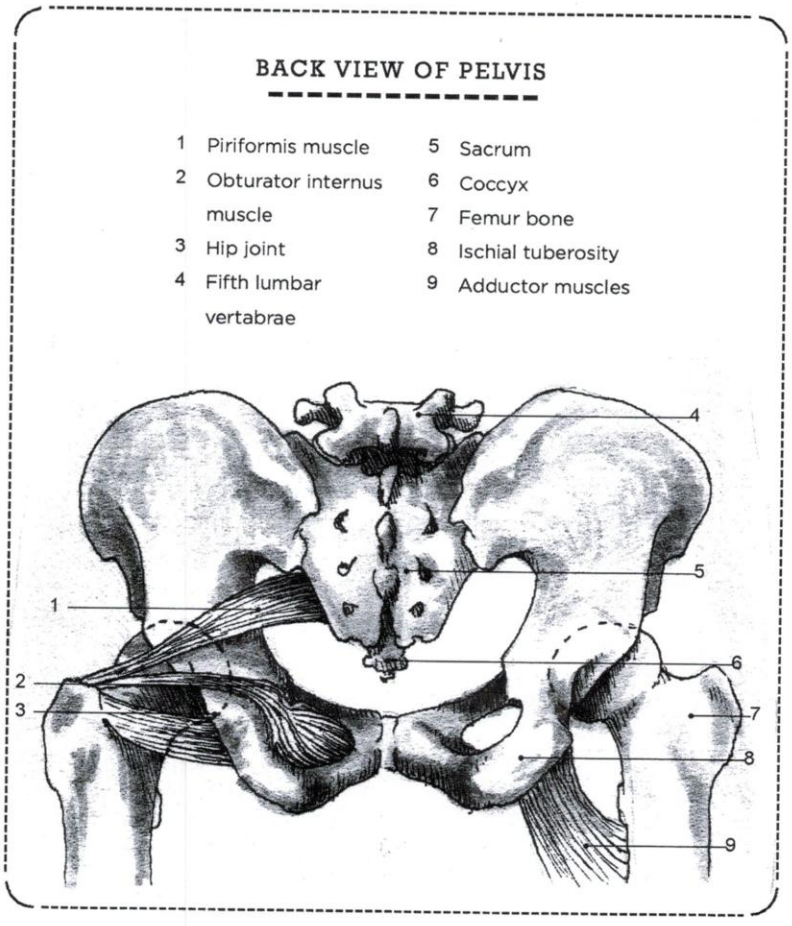
(from page 7)

study based on what's available in your community. However, MRIs are the most helpful, since the soft tissues surrounding the bones and joints are easily seen on the new high-resolution scans. They may show signs of labrum tears, impingement, inflammation, or swelling in the tissues around the hip joint. The newer scans can also image the obturator internus muscles and reveal the course of the pelvic floor nerves. Abnormalities here help prove the link between your hip and sexual pain.

Diagnostic Injections

Specialists will often recommend a diagnostic intra-articular hip injection or injections into inflamed tendons or muscles. Using x-ray or ultrasound guidance to pinpoint the correct location in your pelvis, a specialist will administer an injection combining numbing and anti-inflammatory medications.

See ORTHOPEDIC, page 15



Orthopedic

(from page 9)

In particular, this approach can offer remarkable relief for hip labrum tears and FAI, as well as for associated vulvar and vaginal pain. Although the pain relief may not occur for one or two weeks, any reduction in pain suggests that your hip is indeed involved in your sexual pain. The contrary, however, is not true. If you undergo a diagnostic injection and receive no relief from pain, you may still have an orthopedic disorder, but your pain may be the result of changes in the surrounding muscles, fascia, and nerves.

Specialists can use similar injections to test for lower-back problems too. These may include: "facet joint injections" into areas where one vertebra connects to the next; injections into the muscles that surround the spine and that may be pulling on the disks or squeezing down on nerves; epidural injections; and spinal nerve blocks. For coccydynia, injections into and around the coccyx may be helpful diagnostic tools. Diagnostic injections are also available for such structures as ligaments and tendons attaching to pelvic bones and joints—including the adductors, iliopsoas conjoined tendon, gluteal muscles, sacro-iliac joint and surrounding ligaments, sacrotuberous ligament, ischial tuberosity, and pubic bone.

Treatment: What You Can Expect

Sometimes an orthopedic problem requires a rapid or extreme response, as in the case of one of our patients who was found to have a lumbar spine fracture. You are far more likely to have several treatment options, and you should begin with the least invasive, progressing to more complicated treatments only if you have to. You should try to avoid abnormal movements in order to reduce inflammation and muscle imbalance. For example, if you have a hip problem, you need to avoid prolonged sitting, moving your legs to extreme positions, and stressful repetitive motions. For back problems, avoid lifting, unbalanced bending, and poor posture. For coccyx and sit-bone pain, avoid sitting, and use a padded seat cushion if you must. Anti-inflammatory medications such as ibuprofen and naproxen will help your joints heal, along with the surrounding muscles, ligaments, tendons, and cartilage. Topical anti-inflammatory or lidocaine skin patches can also be helpful. In some cases, oral muscle relaxants can keep muscles from overworking and going into painful spasm. Pain medications might also help you to walk more normally, removing the strain on the problem area.

Whatever other types of pain relief you employ, your mainstay of treatment for most orthopedic problems is almost certainly physical therapy. Make sure your physical therapist understands how to rehabilitate both your orthopedic problem and your pelvic floor. Your treatment goals include: normalizing your pelvic floor muscles; mobilizing the fascia, other connective tissue, and even skin of the hips and lower back; strengthening the hip and core muscles, including the gluteal muscles, which often become extremely weak; relaxing the obturator internus and piriformis muscles, taking pressure off pelvic nerves; and fixing gait and movement abnormalities – all the way down to your feet.

Moving up the scale to more invasive treatments, the injections discussed in the diagnosis section can also be helpful as treatments. Other treatment options are cold laser, ultrasound, dry needling, and trigger-point injections to muscles in pain or spasm due to imbalance. If none of these approaches succeed, you might consider surgical options.

Potential Breakthroughs: Looking Ahead -

The future is very, very hopeful for healing orthopedic problems causing sexual pain, as research is advancing rapidly to devise less-invasive means to

See ORTHOPEDIC, page 16

NICHD

(from page 1)

approached vulvodynia as a chronic pain syndrome rather than a gynecological disorder, bringing together a wide array of scientists and clinicians in the neuroscience field and exploring the underlying mechanisms of chronic pain. In addition to stimulating new ideas that will enhance ongoing vulvodynia research, NICHD aimed to encourage investigators working on chronic pain to expand their focus and include vulvodynia in their studies.

The NICHD viewed this meeting as *one* important step in expanding NIH-funded research on vulvodynia. In his opening remarks, NICHD Director Dr. Alan Guttmacher noted, "The importance of this topic is evident by the fact that both myself and our Deputy Director will be present for the entire conference, which is rare." He promised that the NICHD directors and staff would be listening very carefully to the presentations and general discussion, as well as recommendations that stem from the meeting. In her opening statement, ORWH Director Dr. Vivian Pinn pledged the continued involvement and support of her office: "We look forward to working with NICHD and other NIH Institutes to advance vulvodynia knowledge and awareness. We commit our continued collaboration and support to finding answers that you are seeking and that we need."

The meeting featured a mixture of presentations, general discussion and breakout sessions. In addition to serving on the planning committee, NVA Executive Director Christin Veasley led one of the five breakout sessions on communication and education. Other breakout group topics included the pathophysiology of pain, diagnosis and management of vulvodynia, vulvodynia treatment and medication issues and public-private partnerships to expand vulvodynia research. The meeting ended with a presentation of the recommendations from each of the five breakout group leaders and general discussion by the meeting attendees.

NICHD's science writers are in the process of drafting a white paper that will include a summary of the presentations, breakout sessions and strategic research plan. Upon completion, the paper will be posted on NICHD's web site for public comment. NVA will circulate an e-mail announcement at that time so that our patient, clinical and scientific communities can review the document and submit comments. (You can sign up to receive e-mail correspondence from the NVA at www.nva.org/email_newsletter.html.)

NICHD's goal for this workshop was to stimulate scientific discussion and facilitate more research that will improve the lives of women who suffer from vulvodynia. We are hopeful that the NICHD's renewed commitment to studying this long neglected disorder will transform this strategic research plan into the answers that sufferers need. ■

Orthopedic

(from page 15)

treat these problems. Physical therapy techniques are improving; the individuality of our bodies is being recognized; and new substances to optimize healing are being studied.

[Editor's Note: This book will be available in November 2011. Help the NVA raise funds for medical research by pre-ordering the book from Amazon through NVA's web site. Just click on the book cover located at www.nva.org/book_list.html, proceed with your purchase and Amazon will donate a percentage of your purchase price to the NVA. Additionally, the authors are generously donating a percentage of the book sale proceeds to the NVA.] ■