National Vulvodynia Association

NVA News

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Confusing Issues in Postmenopausal Vulvar Pain

By Martha Goetsch, M.D., M.P.H.

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Menopause is a time of life that requires certain decisions regarding health and comfort. These issues can be quite personal and sensitive, especially regarding sexual intimacy. This article will focus on changes that occur in the genital area after menopause, and address how vulvar health specialists can be critically helpful regarding postmenopausal women's concerns. The findings below, based on scores of postmenopausal women seen in our vulvar pain clinic, should provide a cautionary perspective.

About 50 percent of women report discomfort in the inner vulva by year five after last menstruation. Different names have been used for this condition. Since women describe the initial symptom as dryness "inside" (rather than in the external vulva), doctors assume the location is the vagina, and tend to use the descriptive term, *vaginal dryness*. The most common diagnostic term for the condition is atrophy, thinning and eventually shrinkage in the tissue, which is what happens to the female genital tract without estrogen. The uterus quietly shrinks. The vaginal walls thin and secretions decrease and later disappear. The external vulvar tissues also thin. These

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Low Level Laser Therapy for Provoked Vestibulodynia

By Ahinoam Lev-Sagie, M.D.

Ahinoam Lev-Sagie, M.D., is an obstetrician-gynecologist with specialized training in the clinical aspects of vulvovaginal disorders. She is a senior lecturer in the faculty of medicine of the Hebrew University in Jerusalem and established vulvovaginal clinics at the Hadassah University Hospital and Clalit health care medical union in Jerusalem.

Provoked vestibulodynia (PVD) is clinically defined as chronic, unexplained pain in the vulvar vestibule in response to touch or pressure. Most women with this condition present with dyspareunia (painful sexual intercourse). Health care providers have used various treatments for PVD and it is clear that women do not respond uniformly to these treatments.

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are well-known changes, and the official medical term has been *vulvovaginal atrophy*. Recently, the term was changed to *genito-urinary syndrome of menopause*, partly to acknowledge that changes also occur in bladder function without estrogen, but also because atrophy was not a term women found appealing.

Menopause and Life Expectancy

When women's ovaries run out of the millions of eggs they had at birth, they lose the ability to produce estrogen. When there is no more estrogen, menstrual cycles and all vaginal bleeding stop. In the U.S., the average age of menopause is 51.

Because life expectancy has slowly increased over recent centuries, the average number of years that women live after the loss of estrogen has also increased. One hundred years ago, women's life expectancy was about 50 years, the approximate age of menopause. The U.S. Census Bureau predicts that two-thirds of the population will now live to age 85 or beyond. Today, the number of postmenopausal women in the U.S. is growing and expected to be 50 million by the year 2020. Information is incomplete for women in our present era who are traversing the terrain of longer lives after ovarian function stops. The symptoms of hot flashes and night sweats typically fade after several years. By contrast, many women develop worse and worse vulvar complaints during the years after menopause.

The Power of a Name

Sometimes a descriptive term like *vaginal dryness* can create assumptions that keep science from progressing. As the field of vulvar health has developed, and as specialists have increased their understanding of vulvar pain conditions, new information about postmenopausal genital symptoms needs to be considered. First is the question of the origin of these symptoms. Secondly, how do symptoms progress after estrogen has been absent for years? Do the symptoms remain mild, like dryness, or do they progress to intense pain?

Historical Perspective

Use of estrogen by millions of postmenopausal women changed in 2003 after the Women's Health Initiative (WHI) at NIH was stopped prematurely. The WHI was a set of studies on oral hormone supplementation in 68,000 postmenopausal women. For almost 15 years afterwards, women have been and still are admonished to minimize or discontinue use of supplemental estrogen. Currently only 8 percent of American women use supplemental estrogen of any kind. We may now be seeing the results of a large social

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The NVA is not a medical authority and strongly recommends that you consult your own health care provider regarding any course of treatment or medication.

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experiment in which estrogen use has been minimal in postmenopausal women. The vulvar consequences deserve study.

Where Does it Hurt?

The location of uncomfortable or painful sensations after menopause is reported by women to be "just inside" the vagina. Medical providers who examine these women readily note change in color in the vagina, usually pale but sometimes red, and a decrease in normal vaginal secretions. However, providers who are not vulvar specialists are unlikely to focus on the unique nature of the inner vulva, known as the vestibule (small area at the entrance to the vagina, not deep inside). Is this the area that becomes tender after menopause, not the vagina? Lessons from younger women with localized provoked vestibulodynia provide a guide, as does scientific study of breast cancer survivors.

Localized Provoked Vestibulodynia

The vulvar vestibule is an area known to be extremely sensitive to touch in young women who have localized provoked vestibulodynia. Touch causes burning pain in the vestibule and severely interferes with penetrative intimacy. Biopsy of this painful tissue reveals an unusually high number of pain nerves at the surface. The vagina itself is not tender in vestibulodynia.

Women of all ages come to our vulvar clinic presenting with localized vestibular tenderness that causes pain with sexual intercourse. All patients are examined carefully, including postmenopausal women reporting painful vaginal dryness. Consistently in these patients, the vestibule has areas of exquisite tenderness when examined with a cotton swab test. Light touch feels like burning pain. This pain can be extinguished by applying a compress of lidocaine, a topical numbing solution, for a couple of minutes. After lidocaine application, the entire examination, including insertion of a speculum, is free of burning.

Lessons from Breast Cancer Survivors

If lidocaine therapy can eliminate tenderness during a medical exam, could it prevent painful sexual intimacy for these women when lubricants don't work? What can we learn from women with a history of breast cancer, who are urged not to use estrogen? For our study of breast cancer survivors, we sought women who had more than mild discomfort with intimacy. They had pain that consistently interfered with intimacy, and 50 percent had stopped having sex. The average pain score with sex was 8 on a 0 to 10 scale, clearly severe pain. We explained to patients how to apply lidocaine solution using a hand-held mirror to see the inner vulva. At home, they practiced and tested its efficacy by inserting a tampon. Once confident that insertion did not cause pain, they applied lidocaine prior to sexual intercourse. They were instructed to apply the solution for three minutes and then insert a lubricant. To be scientific, half of the group initially received bottles of sterile water and half received the lidocaine solution, which are indistinguishable clear liquids.

The average pain scores with sexual intercourse in those receiving lidocaine decreased from 8 to 1. The women using water reported an average pain score of 5. After a month, all were given the numbing solution, and, in follow-up, 95 percent were having intercourse without pain as often as they wished. We did not treat atrophy in the vulva or inside the vagina. All women still had severe thinning produced by lack of estrogen. Our conclusion? Research on painful sex after menopause should study the inner vulva and consider the possibility of vestibulodynia rather than simply thinned tissues.

Typical Therapies

Lubricants, a first treatment for women with vaginal dryness, should correct discomfort, just as lip balm soothes chapped lips. Do lubricants correct vaginal

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dryness and painful intercourse? They do relieve mild dryness, but not pain. This was the conclusion of a Cochrane literature review of painful sex after menopause. (These reviews are published by the Cochrane Library, renowned for its scientific reviews.) If vulvar pain is the problem, lubricants have limited effect. Estrogen therapy helps with more severe cases. Creams, vaginal tablets and vaginal rings containing estrogen are on the market. The strategy is to adjust the growth of cells lining the vagina, which can be accomplished with very low doses. Unfortunately, estrogen therapy has not been studied to see if it relieves pain in the inner vulva, the same area that allowed breast cancer survivors to be pain-free with the use of lidocaine.

Does Estrogen Treat the Whole Problem?

Estrogen therapy does treat vaginal thinning quite effectively. It takes only about two weeks of daily therapy to see normal mature cells lining the vagina, plus a return to normal acidity. This improvement in thinned tissue is what the FDA requires for a product to be authorized for use in postmenopausal genito-urinary syndrome. Does this improve pain symptoms? Published studies indicate that 38 percent of postmenopausal women still have intimacy pain despite using estrogen products. From our vulvar clinic patients, we know that many women find estrogen products too expensive and messy for the minimal benefits. They are treating only the vagina, several inches above the location of pain. Furthermore, doses are minimal since it does not take much estrogen to thicken vaginal walls. Could this be the wrong dose in the wrong place?

The success of lidocaine applied only to the painful vestibule challenges assumptions about painful sex after menopause. In addition, our group has published data showing that there is an abnormal increase in pain nerve fibers in vestibular biopsies from older women with intimacy pain after menopause. Our belief is that lack of estrogen after menopause causes two problems, but the medical field usually focuses on only one, i.e., thinning cells. The second condition may be stimulation of increased nerve fibers in the inner vulva, occurring in addition to thinning of the tissue. If estrogen is an appropriate therapy and placed several inches higher than the painful vulvar area (in doses that promote full maturation of cells, but don't reduce nerve fiber density), it could explain the frustration of many women who use vaginal estrogen but still have pain with sex.

Study of Painful Sex After Menopause

In December 2016, we were happy to be awarded a research grant from the NVA, and one from the Patty Brisben Foundation, to study vulvar pain versus vaginal atrophy in postmenopausal women who can use estrogen. In our study, "Treating Where it Hurts," we will treat only the tender area of the inner vulva, with patients applying estrogen cream every night for an extended period of time. Our hypothesis is that an increase in nerve fibers takes months or years to develop and needs a long course of therapy to recede and eliminate the pain. The dose to reverse vaginal wall thinning is likely too little and too intermittent to treat postmenopausal women with vulvar pain. Microscopic examination of tissue samples may show that nerve fibers are abnormally plentiful at the onset of therapy, but recede to a normal amount after daily therapy.

Can Touch Pain Become Constant Vulvar Pain?

The North American Menopause Society states that genital symptoms get progressively worse over time. In recent years, older women, who first had only pain on touch, have been coming to our vulvar clinic with severe vulvar pain that is constant and burning. Many have consulted specialists in gynecology, urology and pain management. Most clinicians would conclude that these women have vulvodynia related to malfunctioning nerves, rather than an excessive number of nerve fibers. The lidocaine test can help us distinguish between these two types of vulvar pain. If lidocaine applied for several minutes stops or significantly reduces the burning pain, we hypothesize that the condition is

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Psychological Techniques for Managing Pain

Vulvodynia is chronic vulvar pain without a clear identifiable cause. But what is chronic pain? Acute pain is short-term and serves an important purpose, because it alerts you to an injury, e.g., a broken arm. Pain is chronic when it lasts for three or more months and injury to the body has healed. Chronic pain is much more complex. Although people usually think of pain as a purely physical sensation, there are also psychological and emotional consequences. For example, chronic pain can lead to negative thoughts and feelings of anger, anxiety, sadness, and hopelessness. Pain that affects sexual and social aspects of your life often requires a combination of medical and psychological interventions.

Psychological Consequences of Pain

Recurrent or constant pain often leads to the development of negative thoughts/behavior that worsen daily functioning, increase emotional distress, and/or prolong the experience of pain. Negative thoughts and emotions include *pain catastrophizing* and *fear of pain*. Pain catastrophizing is magnifying the negative consequences of pain, obsessively focusing on it, and feeling helpless, e.g., thinking that nothing you do can relieve the pain. Fear of pain can put more limitations on your life than the pain itself. If you are afraid to do activities because they *might* worsen your pain, you will limit positive experiences and may become depressed. The goal of psychological therapy is to help you reach pain acceptance, acknowledging pain without judgment, minimizing negative thoughts, and learning to live a rich life in spite of pain.

Psychological Intervention

There are four therapeutic modalities that have demonstrated efficacy in managing chronic pain: (i) operant-behavioral therapy, (ii) mindfulness-based stress-reduction, (iii) acceptance and commitment therapy, and (iv) cognitive-behavioral therapy (CBT).

Operant-behavioral therapy focuses on extinguishing maladaptive behavioral responses and fostering adaptive behavioral responses to pain. Your behavioral responses can be altered using reinforcement and punishment. The goal of therapy is to remove associations between certain behaviors and pain. For example, patients gradually increase engagement in activities and realize that there is no increase in pain or catastrophic outcome. When behaviors are performed without negative consequences, patients are relieved and begin to realize that some of their fears are unwarranted.

Mindfulness-based stress-reduction, a technique that promotes a nonjudgmental approach to pain and separates the physical and psychological aspects of pain, uses meditation and daily mindfulness practice. Mindfulness is a mental state of focusing on the present moment, while calmly acknowledging and accepting one's feelings, thoughts, and physical sensations. Through the practice of mindfulness, patients learn to view thoughts about pain as discrete events, rather than as an indication of a problem that needs to be remedied. Becoming skilled in meditation and mindfulness decreases the likelihood of maladaptive behavioral responses to pain.

Acceptance and commitment therapy involves teaching purposeful awareness and acceptance of pain, thereby minimizing focus on the pain. Unlike mindfulness-based stress-reduction, acceptance and commitment therapy does not use meditation. Instead, the process involves identifying the individual's values and goals in order to foster behaviors that further these values and goals. Acceptance and commitment therapy encourages the patient's exploration of her potential life direction as if she was no longer experiencing chronic pain. The therapist asks whether attempts at pain relief have moved you toward or away from your values and goals. These valued life directions are then used to guide and motivate you while you persevere in seeking pain relief.

Cognitive-behavioral therapy targets maladaptive thoughts and behavior by teaching you how to

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eliminate and replace them with positive thoughts and behavior. The therapist promotes relaxation and deep breathing, instructs you to schedule pleasurable events, teaches assertive communication, and helps you to pace yourself to prevent or minimize episodes of pain. The essence of CBT is cognitive restructuring, i.e., identifying and replacing negative thoughts about pain with thoughts that encourage adaptive behavior and positive functioning. For example, the thought, "this pain will never get better" should be replaced by, "I'm just having a pain flare and it will get better." Modifying longstanding thought patterns is challenging, but well-worth the effort.

While all of these interventions have shown clinical value in treating chronic pain, most studies involving women with vulvodynia have focused on the efficacy of CBT. In 2001, Sophie Bergeron, Ph.D., University of Montreal, compared group CBT to two common treatments for provoked vestibulodynia: surface electromyographic biofeedback and vestibulectomy. Statistically significant reductions in pain at post-treatment and at 6-month follow-up were reported in all treatment groups, with those undergoing vestibulectomy reporting the most relief. Results of the 2.5 year follow-up study found that treatment gains were not only maintained long-term, but that participants had even less pain at 2.5-years than at the 6-month follow-up. Although results generally continued to support more success with vestibulectomy than with CBT and biofeedback interventions, it was not the case for one critical outcome measure, self-reported pain during intercourse. At the 2.5 year follow-up visit, there was no significant difference in long-term improvement in pain during intercourse for those in the vestibulectomy and CBT treatment groups.

In a more recent study of women with provoked vestibulodynia (PVD), Corsini-Munt (2014) evaluated the efficacy of group CBT versus applying a topical steroid. Both groups reported a statistically significant reduction in pain immediately after treatment and also at 6-month follow-up. The interesting finding was that the group receiving CBT reported significantly more pain reduction at the 6-month follow-up than the topical steroid group. Although both groups significantly improved on measures of psychological adjustment, the CBT group had a significantly greater reduction in pain catastrophizing immediately after treatment. Both groups' sexual functioning significantly improved after treatment and at 6-month follow-up, but again the CBT group did significantly better. Treatment satisfaction, pain relief and less difficulty with sexual intercourse were significantly greater in the CBT group.

A 2015 study, detailing the results of a combined therapeutic approach for women with PVD, investigated CBT plus mindfulness training. Women received a four-session group treatment that taught mindfulness meditation skills and also participated in a group discussion of CBT. A total of 85 women were assigned to immediate treatment or a 3-month wait-list (followed by treatment). Questionnaires and a genital pain assessment were administered pre- and post-treatment, and at the 6-month follow-up. Women assigned to the two groups did not significantly differ on any measure at baseline. The following outcomes improved with treatment: pain catastrophizing, pain self-efficacy (a measure of one's perceived ability to participate in sexual activity or to reach certain goals in pain management), genital pain induced by a cotton swab examination, pain hypervigilance, and sex-related distress. There was, however, no change in pain with sexual intercourse, possibly because few women engaged in sex within the time frame of the study.

The aforementioned studies and many others showing psychological interventions to be effective in the treatment of vulvodynia led a group of six vulvodynia specialists to recommend these therapies as part of a multi-disciplinary treatment approach. They acknowledge that additional studies are needed to assess the benefits of CBT and mindfulness-based stress reduction. One such study, underway at Oregon Health and Science University, will compare mindfulness-based cognitive behavior therapy versus group seminars on

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Testing Possible Biomarkers for Chronic Pain

Daniela Salvemini, Ph.D., professor of pharmacology and physiology at St. Louis University (SLU), received a $363,000 grant from The Mayday Fund to advance her research that may lead to the development of new types of pain medications. She has discovered a novel pain pathway and is now determining whether either of two key molecules can be used as biomarkers for pain associated with chemotherapy-induced peripheral neuropathy, endometriosis, interstitial cystitis and vulvodynia. "It is exciting to reach the moment when you can take your research from the laboratory to the clinic," said Salvemini.

In her earlier work, Salvemini discovered pain pathways that helped researchers understand how pain occurs. (Each pathway is a molecular series of events that lead to pain.) These pain pathways are dependent on two molecules: S1PR1 (sphingosine 1-phosphate receptor subtype 1) and A3AR (A3 adenosine receptor subtype). By modulating these molecules, scientists were able to block and reverse pain. This finding is particularly encouraging because a drug that modulates S1PR1 is already on the market and another drug that modulates A3AR is in advanced clinical trials.

Salvemini's current goal is to determine whether S1PR1 and A3AR can serve as *biomarkers* in the clinic. Based on her previous work, Salvemini believes that higher levels of S1PR1 and/or A3AR not only correlate with chronic pain incidence and intensity, but can predict the development of chronic pain syndromes, suggesting these receptors may be targets for new drugs that treat or prevent chronic pain syndromes. "Our goal is to take this exciting basic science work a step further and see if these molecules can serve as biomarkers in people, helping us identify patients who would benefit from drugs that target this pathway and providing a more personalized approach to pain treatment," she said.

In her current study, Salvemini will partner with clinicians in the SLUCare practice to study patients with four different conditions: chemotherapy-induced neuropathic pain, endometriosis, painful bladder syndrome and vulvodynia. "The direct and indirect economic costs of endometriosis are estimated to be upwards of $20 billion annually in the U.S. alone. Having a better way to treat this pain that does not just treat symptoms is long overdue. We must do better for women, and this research collaboration has great potential," said Patrick Yeung Jr., M.D., associate professor of obstetrics, gynecology and women's health, a co-investigator on the endometriosis study.

Chemotherapy-induced pain is a critical unmet need that severely impacts cancer patients, including their ability to receive potentially life-saving treatment. SLU has an enduring commitment to research on certain chronic pain conditions and Dr. Salvemini's innovative approach will also benefit millions of cancer patients. This 'bench to bedside' project is central to the clinical research mission of SLU's hematology and oncology division.

If one or both of these two molecules proves to be a useful biomarker, researchers will have laid the groundwork for a proof-of-concept trial to test a drug that interferes with their molecular pathways. The next step would be to develop a non-narcotic medication that can provide relief for people with chronic pain.

(*Editor's note: Adapted from Measuring Pain: SLU Scientist Tests Possible Biomarkers. February 19, 2017. Full article available at: https://www.slu.edu/news/2017/february/pain_research.php.)*■

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aspects of PVD that affect emotional and physical health. If you would like to participate in this study, go to www.nva.org/for-patients/participate-in-research/other-research-studies.

Further studies are also needed to determine whether operant-behavioral therapy or acceptance and commitment therapy are effective in the treatment of vulvodynia. These techniques have been used successfully in studies of patients with chronic pain, but have not been researched in women with vulvodynia.

Sometimes, modifying a psychological intervention can prove helpful. One such modification tried couple-based CBT for women with provoked vestibulodynia and their partners. The pilot study showed significant improvement in vulvar pain and sexual functioning, which also benefitted partners. A current randomized clinical trial will assess the efficacy of couple-based CBT versus application of topical lidocaine in two Canadian university-hospital centers. Eligible women diagnosed with PVD (and their partners) will be randomly selected for one of the interventions. Participants will be interviewed pre- and post-treatment, and at a 6-month follow-up visit to determine if there is a change in pain during sexual intercourse. Sexual satisfaction and relationship factors will also be assessed. Recruitment is underway for this randomized clinical trial. If you would like to participate in this study or other studies, visit www.nva.org/for-patients/participate-in-research/other-research-studies.

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In Her Own Words

By Natalie G.

I'd like to share my experiences with both vulvodynia and chronic pelvic pain. In late 1999, I started having burning pain in my vulva. I figured it was just another yeast infection and bought Monistat, which didn't help. The pain was severe. I knew it was more than just a yeast infection, so I decided to see a doctor. The gynecologist examined me and prescribed cream after cream, but none of them worked.

One night when the pain was severe, I went to the emergency room with my best friend in tow. At this point, I thought it might be a sexually transmitted disease (STD). The ER physician ran all the STD tests, plus a test for human immunodeficiency virus (HIV). All of the tests were negative. When he examined me, I heard him say, "You have a yeast infection from hell!!" He sent me home with a Diflucan prescription and an incomplete diagnosis.

Also during this period, I found out I was pregnant. I always wanted to have children and was elated. It was the main experience I looked forward to as an adult. Unfortunately, it was short-lived. I had what they call a blighted ovum, which means it is a false-positive pregnancy. After I was diagnosed, I always wondered if my symptoms had anything to do with the blighted ovum.

I continued to do research, because I wasn't getting any better, and came across the word vulvodynia. It sure sounded like what I had. Among other things, I read about the low oxalate diet and calcium citrate. I figured it couldn't hurt, so I tried it. My first doctor wasn't sure what to do, so I found another doctor on the internet. I had to wait awhile to get in, but I was hopeful. I took all my research with me and mentioned that I had already started the diet/calcium citrate and would like to try amitriptyline. The doctor was impressed with my research and put me on amitriptyline (plus Diflucan for a short time). At first I didn't notice a difference, but after several weeks, I did. I had also started soaking in Aveeno oatmeal to soothe the vulva, switched my laundry soap, stopped using fabric softener, and didn't use swimming pools. I am still on the low-oxalate regimen, but have started introducing some moderate oxalate foods back into my diet.

Eventually my doctor moved to another state and, once again, I had to find a health care provider who would be open-minded. Using the internet, I found Dr. Blake, who is excellent. He is so kind and really cares about his patients. Dr. Blake checked me out thoroughly and diagnosed conditions I didn't know I had: vulvodynia, painful bladder, fibroids, and endometriosis. I mostly stayed on the diet, took amitriptyline and followed the self-help tips on the NVA website. Finally, I started feeling better. I still have symptoms of painful bladder, but I do manage. My vulvar pain went away many years ago, but I haven't had sexual intercourse in a long time. I would probably have the vulvar pain if I tried being intimate with someone.

The NVA is such a wonderful resource. They do support, educate, and have an amazing list of providers to try, including Dr. Blake! The women who run it are very nice and knowledgeable, and it gave me peace of mind to find women to talk with who were going through the same thing. That is why I decided to become a volunteer support leader. I'm hoping that I can make a difference in other women's lives. I've been there and am still coping with pelvic pain. I felt so alone for the longest time and then the NVA and Dr. Blake changed my life.

By Céline M.

I have suffered from vulvodynia since summer 2012. It all started with a prolonged yeast infection that would come back over and over again. All the creams and pills for my yeast infection didn't help, and actually made it worse. My pain was severe at this point. I couldn't walk for more than a minute without burning knife-like pain and was unable to do many activities. No doctor could help me. I stopped wearing underwear, because that helped a bit, but I still had lots of pain. During four

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LASER THERAPY

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An emerging medical technology, low level laser therapy (LLLT), applies non-thermal irradiation (low levels of red and infrared light) to a painful area. Since this treatment uses light energy to modulate cell and tissue physiology, it provides a therapeutic benefit without increasing temperature. Low level laser therapy has been effective in treating several pain syndromes without unwanted side effects. It is non-invasive, painless, and can be administered easily in primary care settings.

The exact mechanism of action by which LLLT relieves pain is not understood. Some health care providers think its clinical benefit is due to an anti-inflammatory effect, reducing specific inflammatory markers such as prostaglandin. Low level laser therapy may reduce oxidative stress and skeletal muscle fatigue or inhibit transmission at the neuromuscular junction, directly relieving myofascial pain and trigger points. Some speculate that it produces pain relief via a neural blockade or selectively inhibiting nerve conduction in C fibers, which convey nociceptive pain. These inhibitory effects may be mediated by disrupting axonal flow in neurons or inhibiting neural enzymes. (These enzymes are proteins that serve as catalysts for certain reactions in a nerve or nervous system.)

Since inflammatory mechanisms and peripheral neuropathy are proposed causes of PVD, we investigated whether LLLT could be an effective therapy for these patients. (Thanks to the National Vulvodynia Association for funding our pilot study.) Our study of LLLT was a placebo-controlled, double-blind, randomized clinical trial. Non-pregnant women, 18 to 50 years of age, were eligible to participate if they fulfilled Friedrich's criteria for vulvar vestibulitis, currently known as PVD.

Patients were randomly assigned to groups receiving treatment with LLLT using the Omega XP diode laser system or a placebo procedure. Subjects in the LLLT group were treated with a pen-size probe, transmitting irradiation to the vestibule for 20 seconds at each point of pain. (The irradiation parameters chosen were a wavelength of 820 nanometers, energy density of 32j/cm^2, and pulsed light alternating 73 / 146 / 700 Hz.) The placebo group was "treated" in an identical manner, using the same probe, but without irradiation. Each painful location was treated, thus, the number of treatment points was individualized depending upon each woman's physical examination. Patients were treated twice weekly for six weeks by the same certified pelvic floor physical therapist, for a total of 12 LLLT/placebo sessions. All study personnel were blinded to the treatment arms. Outcome measurements included verbal report, visual analog scale pain score, cotton swab test, tampon insertion pain, daily pain intensity, intercourse pain intensity, frequency of intercourse, and quality of life. Patients who improved following LLLT were followed for one year, using verbal report and the cotton swab test as long-term outcome measures.

Results

Thirty-four patients completed the study, with 18 in the LLLT group and 16 in the placebo group. Participants ranged from 19 to 46 years of age, and duration of pain prior to enrollment ranged from five months to 20 years. The two groups were comparable with regard to age, parity, contraception method, symptoms, duration of pain, and type of PVD (primary or secondary).

Fourteen women in the LLLT group (78 percent) reported an improvement after treatment. (See Fig. 1, p. 11.) At the one-year follow-up, eight of these women (57 percent) reported that pain-relief persisted. Complete pain-relief was reported by two women after six weeks of treatment and again at the one-year follow-up. Four women who reported significant improvement remained satisfied with the results at follow-up, whereas six (33 percent) reported recurrence of vestibular pain and requested additional treatment. Two women who reported moderate improvement following LLLT eventually chose to undergo a

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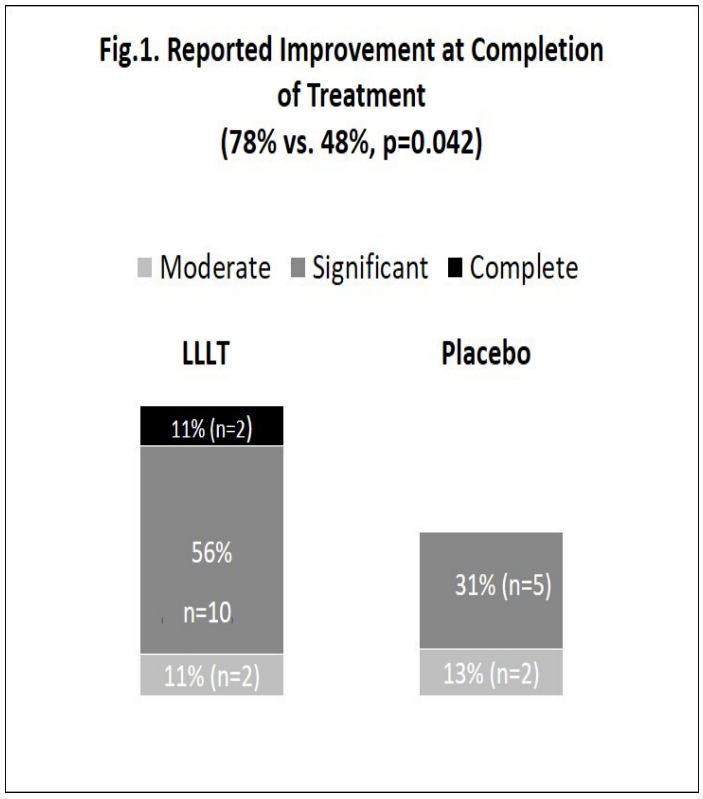
vestibulectomy. None of the patients reported unwanted side effects during the study.

Conclusion

This clinical trial supports the benefit of LLLT for some patients with PVD. Low level laser therapy safely relieved symptoms of PVD in the majority of the treatment group compared to the placebo group. Given this initial response rate, its long-term efficacy, low cost and positive safety profile, we recommend using LLLT. Further studies with a larger population are warranted.



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IN HER OWN WORDS

(from page 9)

years of suffering, I tried numerous things. Most importantly, I didn't give up. I'm a fighter and felt that somehow I would get better. And here I am now, almost pain-free and happier than I've ever been. My experience was like a big rollercoaster and I'd like to share what helped me with the hope it will help you.

It is very important to find a vulvar specialist who can diagnose you. At a University Hospital, I was finally diagnosed with generalized vulvodynia and my doctors were knowledgeable about treatment options. It really helped to know that I'm not the only one with this condition and that there are many treatment options.

Along the way, I tried several medications. First, I was afraid of the pills, but then I discovered that 50 mg of amitriptyline helped me. It took more than three months to really feel a difference, but now I've been taking it for five months and can say that my pain level has dropped dramatically from 8/10 to 2/10 when I walk and 0/10 when I sit or lie down. The last four years have been very challenging and I cried often. There were times when I couldn't imagine living with such pain, but now I'm happier than ever, because I know what a gift it is to be healthy.

Complementary treatments also were useful. It took a long time, but I learned to be patient and listen to my body. Acupuncture, breathing exercises, coping strategies and, finally, osteopathy, were among the most helpful complementary treatments for relieving pain.

While you're in pain, it's important to keep on living your life the best you can. You should talk about your condition with close friends, family and your partner, give yourself enough time to relax, think positively, and keep a pain diary. I really hope that you will feel better soon.■

POSTMENOPAUSAL PAIN

(from page 4)

a late complication of lack of estrogen, which causes growth of excess nerve fibers. Estrogen might be the key to relieving this situation, but any estrogen therapy has, unfortunately, been discouraged in older women.

How severe can this pain get? The first patient I saw in the vulvar clinic complaining of constant vulvar burning was a 79-year-old who was considering how to commit suicide. She could not get away from the excruciating pain despite almost constant use of ice packs. Another woman, 86 years old, described her four years of pain as "13 on a scale of 0 to 10" and said it felt like a blowtorch was aimed at her vulva. She also recalled her elderly mother crying out for years that, "It burns," pointing to her vulva. Both of these patients did much better after using systemic estrogen, e.g., estrogen patches. I have a long list of such patients whose constant pain decreased with supplemental estrogen, but it requires determination to pursue this therapy, because of the medical community's standard warning not to prescribe estrogen therapy in older women.

Conclusion

Vulvar pain after menopause is varied, confusing and understudied. We look forward to carrying out our new study, pursuing the hypothesis that lack of estrogen after menopause contributes to a form of localized vulvodynia by stimulating the growth of nerve endings. We are concerned that our patients with constant burning pain may represent an emerging vulvar problem, resulting from 15 years of health care professionals' warnings to avoid using supplemental estrogen. Gynecologists should, perhaps, expect to see increasing numbers of older women with burning vulvar pain. Women whose ovaries were prematurely removed and survivors of breast cancer may be at added risk. The increasing number of women over the age of menopause provides a strong imperative to study this issue.■