Assistance and Recommendations for GP's: Managing Chronic Vulval Pain 06.06.18

Chronic pain is a complex disease affecting one in five adult Europeans. The relationship between chronic pain, well-being and mental health is well documented. As well as physical effects such as depressed mood and poor sleep the impact on lifestyle is wide-ranging affecting leisure activities (83%), home life (80%) and ability to work (70%). It is a biopsychosocial condition that requires an integrated and multimodal approach to treatment, delivered by a multidisciplinary team, all components of which should be evidence-based.

Chronic Vulval Pain

Vulval pain, which has lasted three months or more, is deemed to be chronic and will frequently have a different cause from pain that has been present for less than a month. Duration of pain is a useful indicator in guiding the diagnosis. The terminology with regard to chronic vulval pain (CVP) is confusing and there is no single definition that is accepted globally.

The term **vulvodynia** was introduced in 1991 by the International Society for the Study of Vulvovaginal Disease (J Reprod Med, 1991; 36, 413-415) in an attempt to define CVP. The current classification is outlined below. Vulval Pain Syndrome is the term used by the European Association of Urology.

2015 Consensus terminology and classification of persistent vulvar pain

From the International Society for the Study of Vulvovaginal Disease, the International Society for the Study of Women's Sexual Health, and the International Pelvic Pain Society**.**

A. Vulvar pain caused by a specific disorder*

- Infectious (e.g. recurrent candidiasis, herpes)
- Inflammatory (e.g. lichen sclerosus, lichen planus, immunobullous disorders)
- Neoplastic (e.g. Paget disease, squamous cell carcinoma)
- Neurologic (e.g. post-herpetic neuralgia, nerve compression or injury, neuroma)
- Trauma (e.g. female genital cutting, obstetrical)
- Iatrogenic (e.g. post-operative, chemotherapy, radiation)
- Hormonal deficiencies (e.g. genito-urinary syndrome of menopause [vulvo-vaginal atrophy], lactational amenorrhea)

*Women may have both a specific disorder (e.g. lichen sclerosus) and vulvodynia

B. Vulvodynia – Vulvar pain of at least 3 months duration, without clear identifiable cause, which may have potential associated factors

Descriptors:

- **Localized** (e.g. vestibulodynia, clitorodynia) or **Generalized** or **Mixed** (localized & generalized)
- **Provoked** (e.g. insertional, contact) or **Spontaneous** or **Mixed** (provoked & spontaneous)

- Onset (primary or secondary)
- Temporal pattern (intermittent, persistent, constant, immediate, delayed)

Establishing a diagnosis

Many women with CVP (and often associated dyspareunia) have suffered for a long time despite repeated visits to doctors and clinics. They may have been given contradictory information and often very few answers. This leads to frustration and meanwhile they are left in pain. CVP often occurs in the setting of multiple comorbidities leading to a complex presentation. One of the most helpful interventions which we can offer is that of a diagnosis, even if it is only the beginning. An accurate diagnosis allows the correct management plan to be put in place. While there are numerous causes for CVP, the commonest cause is vulvodynia. Under-diagnosis and misdiagnosis of vulvodynia is common (1:4 women will suffer from it and of those seeking help, 60% will see at least three providers before getting an accurate diagnosis).

Treatment of CVP

Given the complexity of CVP and the lack of effective treatments it can take time to identify a regime that is helpful. Each patient is unique, what works well for one may not have the same benefit for another. However, with patience the majority of women will improve with the appropriate treatment over time. A multidisciplinary, multimodal approach to treatment is frequently necessary. Thus, referral to a series of different services and healthcare professionals will be required. These include;

- Medical treatments
- Physiotherapy
- Psychological therapies
- Surgery

<u>Medical treatment</u>

Simple measures

All vulval pain will respond in part to simple measures. These include; lifestyle changes (exercise, good sleep habit), cotton underwear, avoidance of vulval irritants, douches, soap and use of lubricants during intercourse.

Specific cause

If a specific cause has been identified, then appropriate management of the underlying condition is paramount in the control of the pain.

Drug treatment

Nonpharmacologic and nonopioid pharmacologic therapy is an important part of treatment. Neuropathic pain dominates in the majority of patients with CVP and particularly in those with vulvodynia. It is important to include drugs that are effective for neuropathic pain. Some patients will also have an element of co-existent nociceptive pain especially if there is an active underlying inflammatory process thus making management more complicated. Conventional painkillers such as

paracetamol, ibuprofen and codeine may be used as first-line treatment for chronic nociceptive pain.

Neuropathic pain

There is good evidence that both the tri-cyclic antidepressants (TCAs) (amitriptyline, nortriptyline and the antiepileptic drugs (AEDs); gabapentin and pregabalin, are effective for treating chronic NP. Amitriptyline is the least expensive, (~14p/day) and most available TCA. It has similar efficacy to other TCAs such as nortriptyline. TCAs can also be useful for chronic nociceptive pain. Although treatment with TCAs has generally been reserved for women who have generalized vulvodynia, recent reports have found these medications to be helpful in the treatment of vestibular pain as well. If there is co-existent depression, consider an SNRI such as Venlafaxine instead of a TCA. The full effect of TCAs may take four or more weeks to achieve.

If using the AEDs, we recommend trying pregabalin first (costs about £2.49p a day), it has similar efficacy to other AEDs such as gabapentin. It is well tolerated and does not interfere with other medication.

Approximately one in three cases of neuropathic pain may respond to opioid analgesics in the short to medium term (~6 months). Where pain is severe or while waiting for other medication to be titrated upwards tramadol can be prescribed (50-100mgs, 4-6 hourly, max 400mgs). The clinical effect occurs within 1 hour and lasts 4-6 hours). Modified release tramadol (50-100mg 12 hourly) may also be used and may be better tolerated.

Recommended first-line medications

Amitriptyline and nortriptyline are long acting so only need to be taken once a day. We recommend starting at 10mg a day. To achieve any pain relief, it is usually necessary to take a dose of 25-30mg daily. The dose should then be titrated (increased) weekly by 10mg to an effective dose (pain relief occurs*****) or to the maximum tolerated dose (side effects make further dose elevation inappropriate) but no higher than 75mg per day. The drug should be continued for a further three months before titration of dose downwards with discontinuation if benefit persists. If pain worsens, the effective dose should be restored.

(*****A clinically significant effect is generally considered to be a 30% or greater decrease in the pain score on a 0-10 scale, where 0 = no pain and 10 = worst imaginable pain)

One of the most common side effects is drowsiness which can be useful if lack of sleep from the pain is a problem (nortriptyline is less sedating). Because of this “morning after” type of feeling we recommend that it be taken one to two hours before going to sleep. If drowsiness continues to be a problem, then pull back as necessary up to 12 hours before you need to wake up in the morning.

There is some evidence that if you react poorly to one drug you may do well with another related drug so it may be worthwhile trying nortriptyline in the same doses as it is considered to have fewer side effects but is more expensive.

Pregabalin is taken twice a day. The therapeutic dosage is 150mg twice daily. We recommend starting at the dose of 75mg twice a day (morning and night). This should then be titrated weekly to

an effective dose (pain relief occurs*) or the maximum tolerated dose (side effects make further dose elevation inappropriate) but no higher than 600mg per day, divided into two doses.

If improvement is achieved the dose may be tapered (reduced) gradually after a 5-6-month period and discontinued. If there is no relief the drug should be weaned off over a couple of weeks.

Second-line medications

Failure to achieve the desired pain relief with any one drug within ~4 weeks after titrating to a dose associated with benefit indicates the need to switch to another drug within the same or a different class.

If side effects cannot be tolerated, then another drug instead of, or in combination with the original drug, can be tried. Combinations may be more efficacious and with lower toxicity than is seen with use of a single drug given alone.

- If first-line treatment was with amitriptyline, switch or combine with oral pregabalin.
- If first-line treatment was with pregabalin, switch or combine with oral amitriptyline

Many people stop taking the medicine because they experience side effects early on but do not feel any benefit. If they can persevere, many will develop a tolerance to the side effects after a few days to weeks and then may start noticing the benefits of the medicine.

If satisfactory pain reduction is not achieved with second-line treatment then consider referral to a specialist pain service where other treatments including non-drug treatments (nerve blocks, pulsed radiofrequency of the pudendal nerve) will be available.

Follow-up

We recommend both early and regular clinical review in order to assess the effectiveness of the treatment and to monitor drug titration, tolerability, adverse effects and, the need to continue treatment (see NICE guidelines)

Flares

For pain flare-ups, the following should all be tried and a combination of all three is required in some cases: regular paracetamol, NSAIDs, and tramadol can be prescribed (50-100mgs, 4-6 hourly, max 400mgs). The clinical effect occurs within 1 hour and lasts 4-6 hours). Modified release tramadol 50-100mg 12 hourly may also be used and may be better tolerated.

- *Topicals*

Local Anaesthetics:

Local anaesthetics (LAs) are used to reduce pain (more minor degrees) and burning through their effect on cytokines. However, good studies in the treatment of vulval pain syndromes are lacking. Applying a LA to the area can reduce the painful feelings and is good for allodynia and hyperalgesia.

They are used either periodically (during pain flares) or regularly (daily application). We recommend lignocaine 5% ointment. One method of application for localized vestibulodynia involves liberally coating a cotton ball with lignocaine 5% and then applying it to the vestibule overnight (for at least 8 hours of exposure). One study showed that after 7 weeks, 76% of women were able to be sexually active, compared with 36% before the start of treatment. In contrast, a randomized, placebo-controlled trial that included lignocaine 5% cream in one arm identified only a 20% reduction in pain for women who had localized vestibulodynia —although, in this trial, it was massaged into the vestibule four times daily. Interestingly it also showed that it was less effective than topical placebo which produced a 33% response rate.

For occasional use, we recommend applying a little to the area about 10 – 15 minutes before sex. For regular use apply 3 times a day. Avoid using in pregnancy and do not use more than 20gm in a 24-hour period.

- NICE clinical guideline 96; **Quick reference guide: Neuropathic pain. The pharmacological management of neuropathic pain in adults in non-specialist settings** Issue date: March 2010
- Review article: **Guidelines for the management of vulvodynia.** BJD; 2010, 162, pp1180–1185: (BSSVD) Guideline Group
- **Guidelines on Chronic Pelvic Pain**: European Association of Urology, Guidelines Working Group for Chronic Pelvic Pain, 2015

Psychological therapies

The psychological impact of chronic pain is well documented. Vulvodynia is four times more likely to occur in women with antecedent mood and anxiety disorders. Anxiety and depression commonly co-exist. CVP will affect psychological wellbeing as well as social and sexual relationships in a significant number of women. This results in distress, suffering and sexual dysfunction which can persist even after the pain is treated. Stress and low mood also increase vulnerability to persistent pain, inflammation and infection.

In addition to physical treatment psychology has been proven to play an important role in the multidisciplinary approach to treatment. New findings on the brain-body connections in chronic pain and our increased understanding of how stress-induced neuroendocrine mechanisms affect skin support the use of psychological therapies for CVP. For example, the finding that acute pain stimuli activate similar brain regions in healthy and in chronic pain patients, while exacerbations of chronic pain activate different brain regions -predominantly areas involved in motivation and emotion.

A number of different approaches and modalities are used. Our thoughts, beliefs and feelings in relation to the pain influence its severity as well as affecting what we do (for example, avoiding important activities such as sex or exercise) which can become part of a negative cycle. Psychological approaches are largely based on CBT and elaborated to include mindfulness and acceptance. CBT – by increasing a woman's sense of control over pain can help to reduce pain severity and improve sexual function. Mindfulness – is a meditative technique that helps people to relate to the pain differently and plays a role in desensitising – both centrally and locally; re-teaching the brain that the

perceived pain is not dangerous. A combination of these approaches with psycho-sexual therapy to re-build confidence can be very effective. However, providers should have been trained to deliver the protocols for pain. Psychological therapy often works well side by side with physiotherapy input.

- **Reference:** Rosemary Basson. The Recurrent Pain and Sexual Sequelae of Provoked Vestibulodynia: A Perpetuating Cycle. *J Sex Med,* 2012; **9**:2077–2092

Physiotherapy

Physiotherapy (PH) has been shown to play an important role in the management of chronic vulval pain (CVP) where there is coexistent pelvic floor muscle (PFM) dysfunction. PFM dysfunction (muscles that do not work properly) includes; *hypertonicity* (tonus is the degree of tension in a muscle and if too high can lead to spasm), *hyperalgesia* (excessive sensitivity to pain), *instability* and *trigger points* (often felt as a painful nodule in a taut muscle band). Vulvodynia (aka vulval pain syndrome) is the commonest cause of CVP.

Many women will also experience a range of other painful conditions termed comorbidities. These include; painful bladder syndrome, irritable bowel syndrome and fibromyalgia. Therefore, as well as evaluating the PFM's the physiotherapist should assess for bladder and bowel dysfunction as well as other comorbid mechanical components (musculoskeletal, fascial & visceral).

A range of interventions are utilised which may include; manual therapy, exercises, relaxation, biofeedback and acupuncture. The advice and treatment offered should be tailored to the patient's individual needs based on the assessment. Consideration of the patient's choices and goals should also be taken into account.

Rehabilitation and normalisation of PFM function can significantly reduce the amount of pain felt and help restore normal (sexual) function. However, it is vital that the physiotherapist is knowledgeable about this condition and has acquired the appropriate level of competence to treat.

- **Reference:** Dee Hartmann. Chronic vulvar pain from a physical therapy perspective. *Dermatologic Therapy,* 2010; **23**: 505–513

Combined Oral Contraceptive Pill

Controversy surrounds the question of whether vulvodynia, namely subtype vestibulodynia, and combined oral contraceptive (COC) use are linked. A number of studies have shown that the use of COC's increases the risk of developing vestibulodynia while others have suggested no association.

Testosterone is important for normal female sexual function. It acts via the androgen receptor (AR) and these are abundant in the vestibule. We know that COC's induce a number of changes. These include; a decrease in the mechanical pain threshold of the vestibule, diminished lubrication (testosterone dependant), a reduction in circulating free testosterone and changes in the AR.

One study (see below) looked at this in more depth. It found that some women have inefficient (faulty) AR's and are more likely to develop symptoms from decreased free testosterone levels than those with efficient AR's. Therefore, they concluded that it is a combination of reduced free testosterone with faulty AR's that predisposes these women to developing pain. This may explain

why it is that only some women get vestibulodynia while on the COC. Thus, women who develop vestibulodynia while taking the COC's and who have no other cause identified may benefit from discontinuing it.

In our practice three quarters (76%) of patients reported definite improvement in their pain within an average of two months after stopping COC's.

We recommend stopping the pill for a trial period of at least 6 months to see if this makes a difference to your pain levels. It may also be worth trying some topical oestrogen cream to the vestibular area.

References:

- Goldstein AT et al. Polymorphisms of the Androgen Receptor Gene and Hormonal Contraceptive Induced Provoked Vestibulodynia. *J Sex Med **;**:**_**,* 2014, 1-8
- Burrows LJ & Goldstein AT. The treatment of Vestibulodynia with Topical Estradiol and Testosterone. *Sex Med,* 2013; **1**: 30-33

Surgery

Surgery has a very limited role to play in CVP. It may be used in certain situations to correct architectural or anatomical changes which are causing mechanical obstructions or narrowing e.g. division of adhesions, a Fenton's procedure.

In women with vulvodynia it is restricted to those with provoked vestibulodynia. Two procedures are performed; vestibulectomy with vaginal advancement and modified vestibulectomy. In the former part (or all) of the vestibule is removed with vaginal advancement and in the latter only the superficial painful tissue is removed. Most published reports are based on the former with success rates of 60 to 96%. Careful patient selection is essential (e.g. accurate diagnosis, no muscle hypertonicity) as it increases the likelihood of a successful outcome and treatment should continue post-surgery. Studies are on-going trying to identify predictors of successful surgery.

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