UROGENITAL PAIN
IN
CLINICAL PRACTICE

EDITED BY
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UROGENITAL PAIN IN CLINICAL PRACTICE
Preface

It is difficult to get a handle on the true incidence and prevalence of urogenital pain. However, the general consensus is that chronic pain is one of the most common reasons for seeking primary care medical advice, and that appears as true for urogenital visits as for any other system disorder. In a proportion of cases, the pain will be indicative of a pathological process that is amenable to evidence-based management, with the condition and disease mechanisms being clearly defined. This book is not about that group of patients; it is about the even larger group of patients where the diagnosis is not clear-cut, and the mechanisms of the pathology and pain are even more obscure. This book aims to help professionals who are called upon to manage that group of patients—specialists from many fields: pain medicine, urology, gynecology, internal medicine, neurology, psychology, counseling, nursing, and family medicine, to name but a few. We have tried to be comprehensive so that basic principles are covered for those with limited experience in the field, and also to present the specialist end to support specialists in an evidenced-based approach. Because this book is the first attempt to be truly multidisciplinary and comprehensive in managing all the needs of this group of patients, we have divided it into four parts: (i) General Mechanisms—Anatomy, Physiology, and Pathophysiology; (ii) The Multidisciplinary Approach; (iii) The Pain Syndromes; and (iv) The Therapeutic Spectrum.

Doctors offer this group of suffering patients poorly defined conditions with names like prostatitis, orchitis, and vulvodynia that have no relationship to underlying mechanisms. Such spurious terms may result in inappropriate investigations as well as treatments, unreasonable doctor and patient expectations. Doctors send patients from one specialist to another in the hope that the specialist will find a cause and also to pass on the responsibility of caring for the patient. Patients “doctor shop,” a phenomenon that is fueled by the internet and, on occasion, by other patients. The article, “A New Classification is Needed for Pelvic Pain Syndromes—Are Existing Terminologies of Spurious Diagnostic Authority Bad for Patients?” [to which the three editors of this book contributed (1)] highlights this problem and makes a plea for a chronic pelvic pain disorders classification system that is easy to use and reflects the limitations of our current understanding.

We hope that this book takes up the theme of that editorial in which a new approach to the management of chronic urogenital pain is suggested. The editors have a long history of trying to move this process forward, and they have also contributed to several reviews and guidelines with the aim of seeing improvement in the management of this difficult area (2–4).

Pain is a symptom, and, in the absence of a classical disease process that requires treatment in its own right, the symptom needs to be managed. There are two aspects to this:

1. The mechanism of the pain can be managed.
2. The effects of the pain on the patient can be managed.

Part of this book covers urogenital pain mechanisms and their management. In certain cases, recent understanding of what was a poorly understood disease process has led to
a better description of the underlying disease (for instance, pudendal neuralgia or pelvic floor muscle triggerpoints), and specific treatments related to that process have been suggested (e.g., pudendal nerve blocks and decompressive surgery, or trigger-point release, respectively). In many cases, the evidence base remains weak, but progress is being made. In many other cases, the pathology remains a complete mystery. Many chapters deal with such pain conditions, trying to lay out clearly what is known and to provide an evidence-based approach to management. Major advances in understanding the nature of pain, its pathways, and its chemical neuromodulation are likely to lead to new interventions. Pain can thus be treated as a disease process in its own right. Several of the chapters in this book cover that.

This book also looks at the effect of the pain on the patient and its impact on the patient’s family, society, and the medical profession. Multiple chapters cover the emotional and sexual problems associated with chronic urogenital pain. It is well established that management of secondary effects can produce major benefits for patients by reducing disability (physical, emotional, and sexual), and thereby improving quality-of-life. This section of the book is as important as the sections on physical mechanisms and their management. Many would say more important!

Much of the work of the editors over the years has involved trying to rationalize the management of this group of patients. There are two important processes that need to be undertaken. Firstly, a better classification system of the pain syndromes needs to be developed. Secondly, the need for multidisciplinary integrated management has to be taken on board.

The International Continence Society document (Abrams) recognized that when the mechanism for a patient’s urogenital pain condition cannot be clearly defined, it is better to present the patient as suffering with a pain syndrome that describes the symptoms and anatomical site, if possible, of the perceived pain. This process was adopted, along with the International Association for the Study of Pain classification (5), in the European Association of Urology guidelines on chronic pelvic pain (3) and is currently being developed to include the multidimensional aspects of pain such as psychological, sexual, and social.

In classifying a person and his or her pain this way, it is intended that the patient is managed in a holistic way and that the role of the multidisciplinary group is clearly identified.

Andrew Paul Baranowski  
Paul Abrams  
Magnus Fall

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A good medical practice is based upon a good understanding of the science of the medical problem: The first part of this book aims to provide that scientific basis. To a certain extent, this is not easy, for the pain syndromes are, by definition, poorly understood. However, knowledge does significantly help us manage pain patients on a day-to-day basis.

Classification and taxonomy are key to placing our knowledge in context, and they are of utmost importance when it comes to data collection and research. For this reason, “Classifications and Definitions of Urogenital Pain” is the first chapter in this book.

Placing the pain syndromes in context with other illnesses demonstrates the importance of the area that we are studying, as shown in Chapter 2, “Epidemiology of Urogenital Pain.”

Next, we look at the anatomy (Chapter 3, “Anatomy of the Urogenital Systems”) and physiology (Chapter 4, “Physiology of the Urogenital System”) of the urogenital system, two areas that are vital to our day-to-day management. All interventional procedures require an understanding of anatomy. However, for the urogenital pain syndromes, anatomy is a cornerstone for understanding the interaction among the body systems and, indeed, the individual organs. Associated with the urogenital pain syndromes, there are, in addition to pain, functional abnormalities in the systems, with symptoms and complaints other than the sensory symptoms. Understanding normal physiology helps us understand and manage these.

The area of chronic pain science has hugely expanded over the past 10 to 15 years. This scientific knowledge provides a very sound basis for a mechanistic approach to understanding both the genesis of urogenital pain and the associated signs and symptoms of the urogenital pain syndromes. We include two chapters covering these areas. Chapter 5, “Acute and Chronic Pain Mechanisms,” covers important general principles as an introduction to the more specific, “Visceral Pain Mechanisms,” Chapter 6.

Finally, we consider the influence of sex and gender (Chapter 7, “Gender and Pain”) and how they may account for some of the variations seen.
INTRODUCTION

Chronic nonmalignant pain syndromes (longer than six months duration) of the urogenital area in men and women are well described, but poorly understood. The urogenital area is often considered taboo in our society, and many patients are embarrassed to suffer from a chronic pain syndrome in this area of the body. In many cases, the etiology of chronic urogenital pain remains unknown. Rarely are these pain syndromes the manifestation of a psychiatric disease. Currently, many available treatment options are empirical only. The purpose of this chapter is to (i) highlight the current status of the classification of these pain syndromes, which is often confusing; (ii) discuss the challenges of revising existing classifications and introducing new ones; and (iii) point out the opportunities presented by classifications, as they are important for patient care and research. At the end of the chapter is a glossary of terms used in this book.

DEFINITIONS OF CHRONIC PAIN SYNDROMES

Definitions are important if a body of reliable information is to be built up in the scientific literature, and they will eventually lead to a better understanding of the pathophysiology of chronic pain. At present, one of the major problems of research into the urogenital pain syndromes is the lack of agreed-upon definitions, which would allow comparison between studies. On the other hand, the lack of understanding of the pathophysiological mechanisms of the urogenital pain syndromes makes it difficult to decide on criteria for defining chronic nonmalignant urogenital pain conditions (1).

Pain is defined by the International Association for the Study of Pain (IASP) as an unpleasant sensory and emotional experience associated with actual or potential tissue damage or is described in terms of such damage (2). In 1979, Bonica expressed the need for a classification of pain, indicating that the development and widespread adoption of universally accepted definitions of terms and a classification of pain syndromes are among the most important objectives and responsibilities of IASP (2). A Task Force on Taxonomy of the IASP was established in 1986 and again in 1994. The most recent edition [2nd edition; (2)] of the “Classification of Chronic Pain” barely mentions the urogenital pain syndromes (they are listed under “XXIV: Diseases of the Bladder, Uterus, Ovaries, and Adnexa and XXV: Pain in the Rectum, Perineum, and External Genitalia”). The classification system of the IASP uses an axial system based on Axis I (region, i.e., pelvic region), Axis II (system, i.e., genitourinary system), Axis III (temporal characteristics of pain, i.e., paroxysmal), Axis IV (patient’s statement of intensity), Axis V (etiology, i.e., trauma or unknown).

The lack of emphasis on the urogenital pain syndromes in the current IASP definitions on pain published in 1994 (2) can quite easily be explained by historical aspects. Urogenital pain belongs to the category of visceral pain (3,4). While chronic visceral pain is a much greater
clinical problem than pain from the skin, until relatively recently, the focus of experimental work on pain mechanisms mainly related to cutaneous sensation. While it was often assumed that concepts derived from cutaneous studies could be transferred to the visceral domain, emerging experimental data over the last 15 years are indicating that the neural mechanisms involved in pain and hyperalgesia of the skin are different from the mechanisms involved in painful sensations from the viscera. This is supported by differences between somatic and visceral pain based on clinical observation. In contrast to somatic pain, visceral pain cannot be evoked from all viscera and is not necessarily linked to visceral tissue injury. Further, visceral pain tends to be a diffuse and poorly localized sensation whereas somatic pain can be localized exactly. Different from somatic pain, visceral pain can be referred to other visceral structures and somatic structures of the same segmental level. For example, patients with chronic urogenital and pelvic pain typically report multiple urogenital and pelvic pain problems, and they present with pain radiating to the lower back and legs (5,6).

As basic scientific research on urogenital pain in animal models has advanced (7,8), and epidemiological studies have documented that urogenital pain syndromes in men and women are indeed quite frequent (1), there has been an increased effort, spearheaded by urologists and gynecologists, in several medical societies to revise and extend the barely existing classification of urogenital pain syndromes.

**CLASSIFICATION OF UROGENITAL PAIN: INTERNATIONAL SOCIETY FOR THE STUDY OF VULVOVAGINAL DISEASE**

One of the earliest consensus committees on the terminology of urogenital pain was focused on vulvodynia. Vulvar pain in the absence of an infectious, dermatological, metabolic, auto-immune, or neoplastic disease had long been recognized as a common clinical problem. Hyperesthesia of the vulva was described in American and European gynecological textbooks more than 100 years ago (9). Surprisingly, despite early detailed reports, “chronic vulvar dysesthesia” disappeared to a large extent from the medical literature until the mid 1970s. In 1976, the International Society for the Study of Vulvovaginal Disease (ISSVD) identified idiopathic vulvar pain as a unique entity and introduced the term “burning vulva syndrome,” based on the observation that most women describe the pain as a hot-burning sensation. The ISSVD subsequently coined the term vulvodynia (defined as chronic vulvar discomfort especially that characterized by the patient’s complaint of burning, and sometimes stinging, irritation, or rawness) to describe this disorder (see Refs. 10,11 for review). The ISSVD stated that vulvodynia was a symptom rather than a diagnosis and that multiple etiologies might be possible. Subsequently, two subsets of vulvodynia were identified. One subgroup of patients complained about entrance dyspareunia (pain with tampon insertion and pain at vaginal penetration during sexual intercourse), rather than diffuse vulvar pain. The term “vulvar vestibulitis” was introduced for this subset of vulvodynia and the following diagnostic criteria were established: (i) presence of severe pain on vestibular touch or attempted vaginal entry, (ii) tenderness to pressure localized within the vulvar vestibule, and (iii) physical findings confined to vestibular erythema of various degrees. The other main subgroup of patients with vulvodynia presented with generalized, spontaneous vulvar pain occurring in the absence of physical findings. The term “dysesthetic (or essential) vulvodynia” was suggested for this symptom complex. Clinically, two different groups of patients with vulvar vestibulitis have been described: primary vulvar vestibulitis is defined as dyspareunia from the first attempt of sexual intercourse, whereas in secondary vulvar vestibulitis, the dyspareunia appears after a period of pain-free sexual intercourse. Based on the concern that the suffix “-itis” in vulvar vestibulitis incorrectly implies an inflammatory etiology, the term vestibulodynia has been suggested (see Ref. 11 for review). The most recent revision of the ISSVD of the terminology of vulvodynia has been published in 2004 (11). This classification suggests categorizing a generalized and a localized (vestibulodynia, clitorodynia, hemivulvodynia, etc.) form of vulvodynia and to differentiate subgroups within those two categories based on the observation whether the vulvar pain is provoked, unprovoked, or mixed (provoked and unprovoked).
AN ANATOMICAL CLASSIFICATION OF UROGENITAL PAIN: INTERNATIONAL CONTINENCE SOCIETY, AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS, AND THE EUROPEAN ASSOCIATION OF UROLOGY

The first major document was published in 2002 by a committee of the International Continence Society [ICS; (12)]. This consensus report was a significant milestone in advancing the terminology of urogenital pain, because an attempt was made to classify different urogenital pain syndromes under “umbrella headings,” thus acknowledging that many of the urogenital pain syndromes in men and women may have common as well as distinguishing features. Definitions in this report are descriptive of observations, without implying underlying assumptions that may later prove to be incorrect or incomplete. The urogenital pain syndromes are described as follows: genitourinary pain syndromes are all chronic in their nature. Pain is the major complaint, but concomitant complaints are of a lower urinary tract, bowel, sexual, or gynecological nature. Seven pain conditions were introduced: painful bladder syndrome [PBS, which is likely to be replaced by bladder pain syndrome (BPS) in the next round of terminologies], urethral pain syndrome, vulvar pain syndrome, vaginal pain syndrome, scrotal pain syndrome, perineal pain syndrome, and pelvic pain syndrome. (For the definitions, please see the glossary at the end of the chapter.)

Two years later, in 2004, guidelines on chronic pelvic pain (CPP) were published in the U.S.A. by the American College of Obstetricians and Gynecologists (ACOG) and the European Association of Urology (EAU). These guidelines included definitions on pelvic and urogenital pain (13,14), recognizing that pelvic and urogenital pain often overlap or are clinically not perfectly separate entities.

The ACOG guideline (13) proposed the following definition for CPP limited to the females: CPP is noncyclic pain of six or more months’ duration that localizes to the anatomic pelvis, anterior abdominal wall at or below the umbilicus, the lumbosacral back, or the buttocks and is of sufficient severity to cause functional disability or lead to medical care. A lack of physical findings does not negate the significance of a patient’s pain, and normal examination results do not preclude the possibility of finding pelvic pathology.

The EAU guidelines included definitions for pelvic/urogenital pain in men and women and extended the definitions put forward by the ICS in 2002 (12), and were based on the axial system used by the IASP terminology (2).

Prostate Pain Syndrome

The EAU working group suggested a practical classification of the poorly defined condition termed “prostatitis.” Chronic prostatitis is a chronic bacterial condition if a pathogen has been demonstrated and a culture-negative disease where inflammation is found microscopically in the absence of an identified pathogen. Discomfort or pain in the pelvic region with a negative culture of specimens and insignificant numbers of white blood cells in prostate-specific specimens, including semen, expressed prostatic secretions, and urine collected after prostatic massage and an absence of any overt urological or neurological disease, is defined as “prostate pain syndrome.” This acknowledges that the etiology of these symptoms is unclear.

Bladder Pain Syndrome

The EAU suggested defining BPS as pain in the bladder area (suprapubically, increasing with bladder filling), urinary frequency, and nocturia. Pain may radiate to the groins, vagina, clitoris, penis, rectum, or sacrum and is relieved by voiding.

Urethral Pain Syndrome

This is defined in the EAU guidelines as dysuria with and without frequency, nocturia, urge, and urge incontinence in the absence of urinary infection.
Scrotal Pain Syndrome
This is defined in the EAU guidelines as chronic scrotal pain for at least six months. The differential diagnosis includes chronic epididymitis, painful cystic lesions, sequelae following trauma or orchitis or pain referred from prostatitis, prostate cancer, anorectal disorders or distal ureteric stones.

Pelvic Pain Syndrome
This is considered in the EAU guidelines as pelvic pain in gynecological practice, including pain associated with pathology, such as endometriosis, childbirth-related injuries, or urinary and gastrointestinal disease.

Pelvic Floor and Pudendal Nerve–Related Pain
These are considered separate categories in the EAU guidelines, acknowledging that pelvic floor overactivity and pudendal nerve compression might be contributing factors to CPP.

CLASSIFICATION OF UROGENITAL PAIN: NATIONAL INSTITUTES OF HEALTH
While the guidelines published by the ICS, ACOG, and EAU discussed above were driven by the need to establish a common terminology to result in better patient diagnosis and care, these efforts were preceded by the work of the National Institutes of Health (NIH) in the United States which, from the late 1980s had established a terminology for urogenital pain syndromes [specifically for “interstitial cystitis” (IC) and prostatitis] for research purposes. Although these NIH terminologies were initially published to identify a homogenous group of patients to be enrolled in research studies, these NIH criteria were often used in clinical practice for diagnosing patients. As it became obvious that these NIH research criteria were “too narrow” for clinical practice, the symptom-oriented classifications published by the different medical associations, as described above, have filled a major clinical need (15).

The NIH/National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) research criteria for IC were based on the clinical symptoms of urinary urgency, frequency and suprapubic, pelvic or perineal pain and the cystoscopic findings of glomerulations or Hunner’s ulcers (16,17). The NIH/NIDDK classified four different subgroups of prostatitis: (i) acute bacterial prostatitis; (ii) chronic bacterial prostatitis; (iii) chronic pelvic pain syndrome (CPPS) inflammatory: WBC in semen/EPS/voided bladder urine and noninflammatory: no WBC in semen/EPS; and (iv) asymptomatic inflammatory prostatitis (18).

THE FUTURE OF THE CLASSIFICATION OF UROGENITAL PAIN—CHALLENGES AND OPPORTUNITIES
The chronic urogenital pain syndromes are often confusing and frustrating for the patient as well as for the health care provider, since the medical work-up is in many cases unrevealing. In fact, many of the urogenital pain syndromes are diagnosed by excluding other organic causes of pain (19), and the patient is left with the term “urogenital pain of unknown etiology.” The pathological classification system has been criticized, since terms used to describe some of the urogenital pain syndromes imply an etiology of the pain complaint that has not been confirmed (20,21). Instead, a descriptive rather than an etiologic approach has been suggested (20). Examples illustrating how misleading some of the terms of the current terminology can be include IC and “vulvar vestibulitis,” which imply an inflammatory/infectious process that has not been documented, despite many investigations driven by the hypothesis of an infectious pathogenesis. In addition, terms such as “prostate pain syndrome” or IC imply that the origin of the pain syndrome is the prostate or the bladder. However, although the pain is experienced in the area where these organs are located, it is often not confirmed, with certainty, that these organs are indeed involved in the etiopathology.
It is felt by many that the EAU classification system (14), based on combining the axial structure of the original IASP classification [2nd edition; (2)] with the syndrome approach of the ICS classification (12), was a good start, but it still needs development. Pain of Urogenital Origin, a special interest group of IASP, has started to set about further developing this approach with input from membership of National Institute of Health, EAU, ICS, ISSVD, and the European Society for the Study of IC/PBS (ESSIC). At this stage, it is likely that the axial structure of the IASP classification system will be kept, as this will allow: (i) A branching approach to diagnosis, and (ii) a descriptive approach to diagnosis. (For more on this topic, please see the explanatory notes associated with Table 1.)

At a recent meeting of the ESSIC, 2006 (personal communication with J. Nordling), ESSIC has decided to do away with the term “interstitial.” They will in the future use the term BPS (PBS also eventually to be dropped). This will be defined as suggested by the ICS for PBS (12), with minor modifications. However, they have also extended the classification system as below (Table 2). This modification takes the NIH/NIDDK research criteria approach for prostate pain (18) a step further, and is likely to influence classifications in the future.

Although the pain of the chronic urogenital pain syndromes is typically localized to the urogenital area, careful clinical history and examination show that patients with urogenital pain often suffer from “more than one pain.” The clinical observations are supported by epidemiological data. Data from the “Interstitial Cystitis Database Study” (22) show that 93.6% of the patients enrolled with a diagnosis of IC reported having some pain in an other part of their body. Of the patients having pain, 80.4%, 73.8%, 65.7%, and 51.5% reported having pain in their lower abdomen, urethra, lower back, and vaginal area, respectively. Although IC has been traditionally viewed as a bladder disease, there is increasing clinical and epidemiological evidence of non-bladder-related symptoms and co-occurrence of IC with other chronic pain syndromes, raising the question of systemic alterations of pain modulatory mechanisms rather than local organ-based mechanisms (23–25). This clinical and epidemiological observation can be explained by neurophysiological characteristics of visceral pain. There are two components of visceral pain, which have already been described more than 100 years ago (26): “true visceral pain”—deep visceral pain arising from inside the body and “referred visceral pain”—pain that is referred to segmentally related somatic and also other visceral structures. Secondary hyperalgesia usually develops at the referred site. While several mechanisms have been entertained to explain the referred pain phenomenon over the last 70 years, the most convincing experimental evidence is provided by the observation of convergence. Convergence of afferent input is a typical characteristic of second-order neurons in the spinal cord that receive visceral input. These visceroreceptive spinal neurons receive convergent somatic input from skin and musculature (27,28). In addition, viscero-visceral convergence of input onto second-order spinal neurons is common (e.g., colon and bladder). This mechanism offers a ready explanation for the segmental nature of referred pain, but does not address explicitly the issue of hyperalgesia in the referred zone. To interpret “referred pain with hyperalgesia” two main theories have been proposed, which are not mutually exclusive. The first is known as convergence-facilitation theory. It proposes that the abnormal visceral input can produce an irritable focus in the relevant spinal cord segment, thus facilitating messages from somatic structures innervated by that segment. The second theory postulates that the visceral afferent barrage induces the activation of a reflex arc whose afferent limb is represented by visceral afferent fibers, and the efferent limb by somatic efferents and sympathetic efferents that pass to the somatic structures (muscle, subcutis, and skin). The efferent impulses towards the periphery would then sensitize nociceptors in the parietal tissues of the referred area, thus resulting in the phenomenon of hyperalgesia. The mechanisms of referred viscero-visceral pain might explain the substantial overlap observed in epidemiological studies between chronic urogenital pain and other abdominal symptoms (5,6,29,30). The mechanisms of viscero-somatic interactions might explain the overlap of urogenital pain and musculoskeletal pain syndromes (31). The current classifications have not addressed the overlap of multiple urogenital pains and other abdominal and musculoskeletal pains, and future classification systems will need to take these comorbidities of the chronic urogenital pain syndromes into account.
<table>
<thead>
<tr>
<th>Axis Ia Region</th>
<th>Axis II System</th>
<th>Axis III End organ as pain syndrome as identified from history, examination, and investigations</th>
<th>Axis IV Referral characteristics</th>
<th>Axis V Temporal characteristics</th>
<th>Axis VI Character</th>
<th>Axis VII Associated symptoms</th>
<th>Axis VIII Psychological symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pelvic PS Urological</td>
<td>Bladder PS</td>
<td>(See Table 2 on ESSIC classification)</td>
<td>Suprapubic</td>
<td>Onset</td>
<td>Aching</td>
<td>Urinary</td>
<td>Cognitive</td>
</tr>
<tr>
<td>Prostate PS</td>
<td>Urethral PS</td>
<td>Type A inflammatory</td>
<td>Inguinal</td>
<td>Acute</td>
<td>Burning</td>
<td>Frequency</td>
<td>Behavioral</td>
</tr>
<tr>
<td></td>
<td>Type B noninflammatory</td>
<td>Urethral</td>
<td>Chronic</td>
<td>Stabbing</td>
<td>Nocturia</td>
<td>Emotional</td>
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<tr>
<td></td>
<td>Scrotal PS</td>
<td>Testicular PS</td>
<td>Ongoing</td>
<td>Cyclic</td>
<td>Electric</td>
<td>Hesitance</td>
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<tr>
<td></td>
<td>Epididymal PS</td>
<td>Rectal</td>
<td>Continuous</td>
<td></td>
<td>Poor flow</td>
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<td></td>
<td>Post-vasectomy PS</td>
<td>Back</td>
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<td>Pis en deux</td>
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<td></td>
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<td>Buttocks</td>
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<td></td>
<td>Ure</td>
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<td>Gynecological</td>
<td>Penile PS</td>
<td>Generalized</td>
<td>Time</td>
<td></td>
<td>Urge</td>
<td>Other</td>
<td></td>
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<tr>
<td></td>
<td>Vaginal PS</td>
<td>vulvar PS</td>
<td>Filling</td>
<td></td>
<td>Urgency</td>
<td></td>
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<td></td>
<td>Vulvar PS</td>
<td>Localized</td>
<td>Emptying</td>
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<td></td>
<td></td>
<td>vestibular PS</td>
<td>Immediate post</td>
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<td></td>
<td></td>
<td>Clitoral PS</td>
<td>Late post</td>
<td></td>
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<td></td>
<td></td>
<td>Endometriosis-associated PS</td>
<td>Provoked</td>
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<tr>
<td>Anorectal</td>
<td>Neurological</td>
<td>Muscular</td>
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</tbody>
</table>

**Note:** This table is a modified version of the EAU table published in 2004 (14). It includes extra axis that are aimed at further subdividing syndromes on the basis of associated symptoms and psychological responses. This approach to describing a patient is considered important, as it encourages a symptomatic approach to management. Developments in this version of the table are likely as ongoing discussions about taxonomy and phenotyping of urogenital pain continue.

a This axial classification starts on the left and, as the features of the pain evolve, the practitioner moves across to the right. If, from the history, examination, and investigations, it is felt that the pain is in the pelvis and the condition is not well defined, then the patient is labeled as suffering from pelvic pain syndrome. If, for example, the symptoms can be localized to the prostate and there is no well-proven diagnosis, then the diagnosis is prostate pain syndrome. If the pain is localized to the bladder, then the diagnosis is bladder pain syndrome (see Table 2). All conditions can be further classified using descriptors (some still to be defined) from the other axis.

**Abbreviations:** GI, gastrointestinal; PS, pain syndrome.
As the above illustrates, the terminology relating to pain and particularly that relating to urogenital pain is constantly changing. In the preface of this book, the editors voice their strong views about terminology and classification. These views are also to be found in their article, published with others, in *Journal of Urology* 2006 (20). The editors are working with others to update the terminology and envisage some radical changes in the future. However, at this point in time, the preferred terminology and classifications are as published in:


For this book, the editors have chosen not to make assumptions relating to the terms used by contributors in their chapters, and therefore the editors have not changed the terms used by contributors. On the other hand, contributors were encouraged to use our preferred terminology where possible. Despite the deficiencies of the older terms, it must be recognized that those terms cannot always be directly changed to our preferred terms.

The following glossary is based upon the above three publications where indicated (comments by the editors appears in italics). These comments illustrate some of the strengths and some of the deficiencies of the terms and classifications. They also indicate as to how the terms and classification may be developed in the future. The editors are very lucky to work with like-minded colleagues, too many for us to recognize in full.

**Allodynia** pain due to a stimulus which does not normally provoke pain (2). This is particularly relevant to many urogenital pains. For instance, filling of the bladder or light pressure on the testis producing pain represents visceral allodynia. Allodynia is a centrally (within the spinal cord and brain) generated phenomenon. Dynamic allodynia refers to pain with a dynamically changing stimulus, such as brush stroke. Static allodynia refers to allodynia associated with a static stimulus such as constant pressure.

**Analgesia** absence of pain in response to stimulation which would normally be painful (2). Sensory analgesia may be due to a peripheral nerve injury, but may also be due to central (within the spinal cord and brain) phenomena. Central analgesia may produce patterns of analgesia that are complex and beyond what is intuitively expected.

**Anesthesia dolorosa** pain in an area or region which is anesthetic (2). Usually associated with a peripheral nerve injury. Patients often find it difficult to understand as to how something can be numb but painful.

### TABLE 2

<table>
<thead>
<tr>
<th>Cystoscopy with hydrodistension</th>
<th>Not done</th>
<th>Normal</th>
<th>Glomerulationsa</th>
<th>Hunner’s lesionb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biopsy</td>
<td>Not done</td>
<td>XX</td>
<td>1X</td>
<td>2X</td>
</tr>
<tr>
<td>Normal</td>
<td>XA</td>
<td>1A</td>
<td>2A</td>
<td>3A</td>
</tr>
<tr>
<td>Inconclusive</td>
<td>XB</td>
<td>1B</td>
<td>2B</td>
<td>3B</td>
</tr>
<tr>
<td>Positivec</td>
<td>XC</td>
<td>1C</td>
<td>2C</td>
<td>3C</td>
</tr>
</tbody>
</table>

a Cystoscopy: glomerulations grade 2–3.

b With or without glomerulations.

c Histology showing inflammatory infiltrates and/or detrusor mastocytosis and/or granulation tissue and/or intrafascicular fibrosis.

*Addendum:* Type XX, XA, XB, 1X, 1A, and 1B were formerly known as painful bladder syndrome (PBS). Type XC, 1C, and all types 2 and 3 were formerly known as interstitial cystitis (IC).

**CLASSIFICATION AND DEFINITIONS GLOSSARY**

As the above illustrates, the terminology relating to pain and particularly that relating to urogenital pain is constantly changing. In the preface of this book, the editors voice their strong views about terminology and classification. These views are also to be found in their article, published with others, in *Journal of Urology* 2006 (20). The editors are working with others to update the terminology and envisage some radical changes in the future. However, at this point in time, the preferred terminology and classifications are as published in:
Anismus the occurrence of anal pain related to the process of defecation and caused by the failure of the striated pelvic floor musculature, including the external anal sphincter, to relax (14). How this relates to anorectal pain syndrome is not clear.

Anorectal pain syndrome the occurrence of persistent or recurrent, episodic rectal pain with associated rectal trigger points/tenderness that is related to symptoms of bowel dysfunction. There is no proven infection or other obvious pathology (14). Chronic pain mechanisms are now well described. The definition needs to be altered to reflect this (see CPPS).

Anorectal pain syndrome/painful anorectal disease definition: the occurrence of persistent or recurrent, episodic rectal pain with associated rectal trigger points/tenderness that is related to symptoms of bowel dysfunction. There is no proven infection or other obvious pathology (14). Chronic pain mechanisms are now well described. The definition needs to be altered to reflect this (see CPPS).

Biopsychosocial model a model that links psychological, social, and biological mechanisms in health and disease. For instance, depression is not only psychological but has a biological basis and can thus result in physical illness and social problems.

Bladder pain syndrome/painful bladder syndrome suprapubic pain related to bladder filling, accompanied by other symptoms such as increased daytime and night-time frequency, in the absence of proven urinary infection or other obvious pathology (ICS definition). Chronic pain mechanisms are now well described. The definition needs to be altered to reflect this (see CPPS).

At a recent meeting of the ESSIC (2006), they have decided to drop the term IC, as IC is poorly defined, and there has been no proven infection or “obvious pathology.” ESSIC has decided to subdivide BPS into three groups. Type 1—no obvious pathology on biopsy or cystoscopy, type 2—histological changes on biopsy, no changes on cystoscopy, and type 3—obvious changes on cystoscopy. Type 3 to be further divided according to the cystoscopy and biopsy findings.

Catastrophic thinking always thinking the worst, panicking. For instance, a patient might think “If I exercise too much, I will harm myself and could end up in hospital and may even be paralysed, so I will do nothing.” All pain patients do this to a certain degree. Too much catastrophic thinking results in increased depression and increased disability.

Causalgia an old term that equates to complex regional pain syndrome (CRPS) type 2. This term should not be used nowadays!

Central pain pain initiated or caused by a primary lesion or dysfunction in the central nervous system (2). Of importance here is the fact that spinal cord injury can produce pelvic pain.

Central sensitization a term that covers those changes that occur in the central nervous system which magnify sensory perceptions. The enhanced responsiveness of nociceptive neurons in the central nervous system is due to multiple complex mechanisms (refer Chapter 6).

Chronic pain Essentially there are two types of chronic/persistent pain. (i) acute pain that has persisted for long enough to be arbitrarily called persistent or chronic, e.g., for three months. However, for CPP, six months is often chosen, as pain may be cyclical on a monthly basis. (ii) Pain involving chronic pain mechanisms such as central sensitization.

Chronic pelvic pain nonmalignant pain perceived in structures related to the pelvis of either men or women. In the case of documented nociceptive pain that becomes chronic, the pain must have been continuous or recurrent for at least six months. If nonacute pain mechanisms are documented then the pain may be regarded as chronic irrespective of the time period. In all cases, there may be associated negative cognitive, behavioral, and social consequences (EAU definition). There are several important parts to this complex definition:

1. The term pelvic pain is used to cover all nonmalignant pains that are perceived or felt to be within the pelvic area. Areas outside of the anatomical pelvis are also included such as the testis, penis, and vulvar region. Including these areas is controversial, but is generally accepted because of the close links in function, physiology, and pathology. This definition is also accepting that pathology outside of the pelvis may cause CPP; for instance, pain may be “perceived” in the pelvis such as referred mechanical back pain where the pain is mainly in the testis.

2. Unlike most other definitions, this accepts that CPP may occur in both sexes! Many of the mechanisms may overlap.

3. There are two reasons as to why the pain may be chronic.
   a. Acute nociceptive mechanisms are the cause of the persistent pain. If the pain has been present for six months, then despite the mechanisms being nociceptive, the pain is...
considered chronic. A time scale of six months was chosen to take account of those pains that are intermittent but with monthly cycles.

b. Chronic pain mechanisms are the cause of the persistent pain. In this case the pain is automatically considered chronic irrespective of duration. (See Chapter 5, How and why does pain become chronic? An overview of the neurophysiology of chronic pain).

4. As well as pain, by definition there will be psychosocial consequences.

5. CPP may be divided into well-defined pain syndromes (e.g., pudendal neuralgia, infective orchitis) and chronic pelvic pain syndrome (CPPS).

CPPS the occurrence of persistent or recurrent, episodic pelvic pain associated with symptoms suggestive of lower urinary tract, sexual, bowel, or gynecological dysfunction. There is no proven infection or other obvious pathology (12). Chronic pain mechanisms are now well described and should be considered as a neurological disease process. The definition of CPPS needs to be altered to reflect this. This has been discussed in several forums, but to date a simple change in the definition to reflect this has not occurred. Perhaps, using the word “local” would do. That is—“... or other local pathology.”

Clitoral pain syndrome refers to pain that can be localized by point-pressure mapping to the clitoris (14).

Cognitions are thoughts.

CRPS currently being redefined by IASP! There are two types: type 1—no obvious nerve injury and type 2—obvious nerve injury precipitating the pain. Salient points include: (i) pain above and beyond what one would expect for the degree of injury, (ii) pain in a regional distribution, e.g., hand and not dermatomal, and (iii) vascular, sensory, and motor dysfunction to varying degrees indicating central nervous system dysfunction.

Diaphoresis excessive sweating.

Dyschezia difficulty in defecating.

Dysesthesia (American)/Dysaesthesia (U.K.) an unpleasant abnormal sensation, whether spontaneous or evoked (2). Paresthesia due to a peripheral neuropathy is an example here. Dorsal root ganglion pathology may cause a running water dysesthesia. Central pathology (within the spinal cord and brain) may cause a burning dysesthesia.

Endometriosis-associated pain syndrome chronic or recurrent pelvic pain where endometriosis is present but does not fully explain all the symptoms (14). Many patients have pain above and beyond the endometriosis pathology; this term is used to cover that group of patients.

Enthesis the point at which a tendon inserts into bone, where the collagen fibers are mineralized and integrated into bone tissue.

Enthesisitis inflammation of enthesis.

Enthopathy pathology of the enthesis.

Epididymal pain syndrome the occurrence of persistent or recurrent episodic pain localized to the epididymis on examination that is associated with symptoms suggestive of urinary tract or sexual dysfunction. There is no proven epididymo-orchitis or other obvious pathology [new and more specific definition than scrotal pain syndrome; (14)]. Chronic pain mechanisms are now well described. The definition needs to be altered to reflect this (see CPPS). This definition could also be subdivided into type 1—no evidence of pathology and type 2—noninfective, inflammatory changes.

Excitotoxicity cell toxicity and death due to massive cell stimulation, this may occur when a nerve is cut or damaged or in a disease process such as multiple sclerosis.

Fibromyalgia poorly understood, generalized muscle pain associated with tender points. Most definitions expect tender points to be in four quadrants. Some definitions are didactic about the number of tender points that need to be found. The pain is usually associated with sleep disturbance and depression.

Generalized vulvar pain syndrome (formally dysesthetic vulvodynia, essential vulvodynia) refers to vulval burning or pain that cannot be consistently and tightly localized by point-pressure “mapping” by probing with a cotton-tipped applicator or similar instrument. The vulvar vestibule may be involved but the discomfort is not limited to the vestibule (14).
Hematachezia red blood in stools.

Hyperalgesia an increased response to a stimulus which is normally painful (2). That is pain above and beyond what you would expect with pin prick examination (Aδ mediated sensation) or heat (C fiber mediated sensation); for example, in a patient with vulvar pain syndrome. This may be peripheral or central phenomena.

Hyperesthesia (American)/Hyperaesthesia (U.K.) increased sensitivity to stimulation, excluding the special senses (2). Nonpainful, c.f. allodynia.

Hyperesthesia (American)/Hyperaesthesia (U.K.) increased sensitivity to stimulation, excluding the special senses (2). Nonpainful, c.f. allodynia.

Hyperesthesia (American)/Hyperaesthesia (U.K.) increased sensitivity to stimulation, excluding the special senses (2). Nonpainful, c.f. allodynia.

Localized vulvar pain syndrome refers to pain that can be consistently and tightly localized by point-pressure mapping to one or more portions of the vulva. Clinically, the pain usually occurs as a result of provocation [touch, pressure, or friction, (14)].

Long term potentiation the long-lasting enhancement in efficacy of the synapse between two neurons, it is thought to be the basis of learning. Central changes with chronic pain may be similar to the changes with long term potentiation.

Maladaptive pain pain that remains long after the injury has gone and is due to central nervous system changes.

Neuralgia pain in the distribution of a nerve or nerves (2). Often due to central nervous system responses to the peripheral nerve injury, the pattern is not as clear-cut as one might expect. The pain and sensory dysfunction may thus be outside the expected distribution. For instance, with pudendal neuralgia, pain and sensory disturbances may spread beyond the expected dermatomal distribution of the pudendal nerve.

Neuritis inflammation of a nerve or nerves (2). For a true neuritis, inflammation of the nerve is necessary.

Neuropathic pain pain initiated or caused by a primary lesion, dysfunction, or transitory perturbation in the peripheral or central nervous system (2) (see neuropathic pain). Transient pain from blunt trauma to a nerve, such as the ulna nerve, where there is no nerve damage would be considered a transitory perturbation.

Neurogenic pain pain initiated or caused by a primary lesion or dysfunction in the nervous system (2). There is an overlap with neurogenic pain. Neuropathic pain suggests a greater involvement of the nervous system than neurogenic pain and is associated with nerve damage. It suggests that central sensitization pain mechanisms are involved.

Neuropathy a disturbance of function or pathological change in a nerve: in one nerve, mononeuropathy; in several nerves, mononeuropathy multiplex; if diffuse and bilateral, polyneuropathy (2).

Nociceptor/nociception a receptor preferentially sensitive to a noxious stimulus or to a stimulus which would become noxious if prolonged (2). Nociception is the “process” responsible for producing pain. Nociception can occur in a decerebrate individual without perception of the sensory stimulus. Pain requires the higher centers.

Noxious stimulus is a stimulus that is damaging to normal tissues (2). Damage may be potential. Hot water can activate a nociceptor due to its potential to cause a burn, but if the endangered part is removed quickly no damage may occur.

Pain an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage (2). Pain involves the whole of the neuroaxis and is associated with a psychological response, c.f. nociception.
Pain threshold the least experience of pain which a subject can recognize (2). Pain thresholds may be used to monitor pain mechanisms. Thresholds to different stimuli may be used (e.g., cold, hot, pressure). Quantitative sensory testing involves using a computerized system to obtain accurate sensory perception data.

Pain tolerance level the greatest level of pain which a subject is prepared to tolerate (2). Pain tolerance may be used to monitor pain mechanisms.

Paresthesia an abnormal sensation, whether spontaneous or evoked (2). If unpleasant, is an example of a dysesthesia.

Pelvic floor muscle pain syndrome the occurrence of persistent or recurrent, episodic, pelvic floor pain with associated trigger points that is either related to the micturition cycle or associated with symptoms suggestive of urinary tract or sexual dysfunction. There is no proven infection or other obvious pathology (14). Chronic pain mechanisms are now well described. The definition needs to be altered to reflect this (see CPPS).

Penile pain syndrome the occurrence of pain within the penis that is not primarily in the urethra, with the absence of proven infection or other obvious pathology (14). Chronic pain mechanisms are now well described. The definition needs to be altered to reflect this (see CPPS).

Perineal pain syndrome the occurrence of persistent or recurrent, episodic, perineal pain that is either related to the micturition cycle or associated with symptoms suggestive of urinary tract or sexual dysfunction. There is no proven infection or other obvious pathology (12). Chronic pain mechanisms are now well described. The definition needs to be altered to reflect this (see CPPS). How this relates to vulvar pain is not clear.

Peripheral neurogenic pain pain initiated or caused by a primary lesion or dysfunction or transitory perturbation in the peripheral nervous system (2) (see neurogenic and neuro-pathic pain).

Peripheral neuropathic pain pain initiated or caused by a primary lesion or dysfunction in the peripheral nervous system (2) (see neurogenic and neuropathic pain).

Persistent pain equivalent to chronic pain, this is becoming the preferred term, rather than chronic.

Post-vasectomy pain syndrome a scrotal pain syndrome that follows vasectomy (14). Post-vasectomy pain may be as frequent as 1%, possibly more. The mechanisms are poorly understood and it is for that reason it is considered a special form of scrotal pain syndrome.

Proctalgia fugax refers to severe, brief, episodic pain that seems to arise in the rectum and occurs at irregular intervals (2). This is unrelated to the need to or the process of defecation. How this relates to anorectal pain syndrome is not clear.

Prostate pain syndrome the occurrence of persistent or recurrent episodic prostate pain, which is associated with symptoms suggestive of urinary tract and/or sexual dysfunction. There is no proven infection or other obvious pathology (14). Chronic pain mechanisms are now well described. The definition needs to be altered to reflect this (see CPPS). The term prostatitis continues to be used to equate to prostate pain syndrome. In the editors and others opinion, although it is recognized that this term has a long history, its use is often inappropriate (20). The NIH consensus (18) includes infection (types 1 and 2) and should not be considered under prostate pain syndrome. The terminology could be changed to be in line with the ESSIC 2006 recommendations. As well as “prostatitis” the term “prostadynia” has been used in the past.

Pudendal neuralgia neuropathic pain in the distribution of the pudendal nerve due to pathology of the pudendal nerve.

Pudendal pain syndrome a neuropathic-type pain arising in the distribution of the pudendal nerve with symptoms and signs of rectal, urinary tract, or sexual dysfunction. There is no proven obvious pathology. (14). Chronic pain mechanisms are now well described. The definition needs to be altered to reflect this (see CPPS). This is not the same as pudendal neuralgia.

Radicular pain pain in the distribution of a nerve root.

Scrotal pain syndrome the occurrence of persistent or recurrent episodic scrotal pain that is associated with symptoms suggestive of urinary tract or sexual dysfunction. There is no proven epididymo-orchitis or other obvious pathology (12). Chronic pain mechanisms are now well
described. The definition needs to be altered to reflect this (see CPPS). It is a generic term that is subdivided into testicular and epididymal pain syndromes. The term is used when the site of the pain is not clearly testicular or epidydimal.

Somatic pain pain perceived or generated in somatic tissues, such as skin and muscles.

Sympatho-nociceptor coupling sympathetic nerve fibers coupling with nociceptors. This may be a mechanism by which the sympathetic system may produce/maintain persistent pain.

Tender points areas of muscle tenderness, usually associated with fibromyalgia. In contrast to trigger points they are often multiple, diffusely spread throughout the body but well localized.

Testicular pain syndrome the occurrence of persistent or recurrent episodic pain localized to the testis on examination that is associated with symptoms suggestive of urinary tract or sexual dysfunction. There is no proven epididymo-orchitis or other obvious pathology (14). Chronic pain mechanisms are now well described. The definition needs to be altered to reflect this (see CPPS). This definition could also be subdivided into type 1—no evidence of pathology and type 2—noninfective, inflammatory changes. Previous terms have included orchitis, orchalgia, and orchidynia.

Trigger points hyperirritable areas said to be located in a taut band of skeletal muscle. They tend to be few in number, produce pain locally, but also in a referred pattern.

Urethral pain syndrome the occurrence of recurrent episodic urethral pain usually on voiding, with daytime frequency and nocturia, in the absence of proven infection or other obvious pathology (12). Chronic pain mechanisms are now well described. The definition needs to be altered to reflect this (see CPPS).

Vaginal pain syndrome the occurrence of persistent or recurrent episodic vaginal pain that is associated with symptoms suggestive of urinary tract or sexual dysfunction. There is no proven vaginal infection or other obvious pathology (12). Chronic pain mechanisms are now well described. The definition needs to be altered to reflect this (see CPPS).

Vestibular pain syndrome (formerly vulvar vestibulitis, focal vulvitis) refers to pain that can be localized by point-pressure mapping to one or more portions of the vulvar vestibule (14). Chronic pain mechanisms are now well described. The definition needs to be altered to reflect this (see CPPS). The ISSVD have subdivided vulvar pain syndrome by the results of cutaneous mapping, the EAU have adapted their recommendations. Interestingly, this approach appears to work.

Visceral pain origin of pain that can be referred to other body parts.

Visceral somatic convergence nerves from the viscera and somatic tissues converge (pass) to the same part of the spinal cord. There is some overlap. This may be a mechanism for referred pain.

Wind up/neural wind up repeated stimulation of the nervous system, which can produce changes within the central nervous system resulting in central sensitization.

ACKNOWLEDGMENTS

Ursula Wesselmann is supported by NIH grants DK066641 (NIDDK), HD39699 (NICHD, Office of Research for Women’s Health) and the National Vulvodynia Association.

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The Multidisciplinary Approach

It is well established that pain medicine should involve a multidisciplinary approach to the management of patients. Various models have been used over the past few years, and such models will continue to develop. However, at this point in time the most practical
method for helping patients presenting with persistent urogenital pain in secondary care

involves two stages. Firstly, good assessment by one or more specialists in the appropriate field (e.g., gynecologists, urologists, or dermatologists) to rule out specific treatable conditions.

At this stage, early introduction of pain management strategies needs to be considered if a treatable cause is not likely to be found. This includes the use of appropriate medication as well as psychological techniques. The second stage involves, to a greater extent, the pain management team, with input from pain medicine doctors, psychologists, specialized nurses, physiotherapists, and sexologists, among others. The following section of this book discusses the multidisciplinary nature of pain medicine.
Chapter 8. Multidisciplinary Pain Management Teams


9 Chapter 9. Doctors and the Female Pelvic Pain Patient


11 Chapter 11. Imaging in Pelvic Pain


12 Chapter 12. Measuring Pain and Disability in Chronic Urogenital Pain


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**TABLE 1 The Kinsey Report Survey of Penis Size in White College Males in the 1950s**

<table>
<thead>
<tr>
<th>Length (in.)</th>
<th>Percent of men (%)</th>
<th>Cumulative percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.00-4.50</td>
<td>1.9</td>
<td>2.4 3.0</td>
</tr>
<tr>
<td>4.51-5.00</td>
<td>2.8</td>
<td>5.2 3.5</td>
</tr>
<tr>
<td>5.01-5.50</td>
<td>15.1</td>
<td>20.3 4.0</td>
</tr>
<tr>
<td>5.51-6.00</td>
<td>31.9</td>
<td>52.2 5.5</td>
</tr>
<tr>
<td>6.01-6.50</td>
<td>23.1</td>
<td>75.3 6.0</td>
</tr>
<tr>
<td>6.51-7.00</td>
<td>15.2</td>
<td>90.5 6.5</td>
</tr>
<tr>
<td>7.01-7.50</td>
<td>4.7</td>
<td>95.2 7.0</td>
</tr>
</tbody>
</table>

Note: The foreskin was retracted for uncircumcised men. The girth was measured midway along the shaft.

a Note that 52% of men—more than half—had a penis 6 inches or less when erect.


13. Block AR. Presurgical psychological screening in


15 Chapter 15. Lower Urogenital Tract Pain and Sexuality


16 Chapter 16. Training in Urogenital Pain Management


The Pain Syndromes

In many ways the next section of this book was one of the most difficult to edit. It attempts to summarize what is known about the various pain syndromes. It does not aim to cover well-defined pathologies, but a range of clinical conditions, some of which are difficult to describe. A number of interesting issues require ongoing debate, backed up by high-quality research.

TERMINOLOGY PROBLEMS

In this section of the book a wide range of terminology has been used. The reason for this is historical and probably relates to an end-organ approach, where inflammation/infection has been viewed as a potentially reversible cause of pain, for example, “chronic prostatitis.”

However, it is becoming widely believed that these conditions should be considered chronic/persistent pain problems. We have tried to rationalize the terminology where possible. However, when referring to past literature with poor inclusion criteria, this has not always been
possible. Also, as a greater understanding occurs, the terminology is constantly developing. For example, vulvar pain syndrome, could (should) be subdivided according to the following criteria:

& Site(s), localized or generalized
& Cause(s), known or unknown
& Precipitating or relieving factors
& Continuous or intermittent At present, a variety of terms are used such as “vulvodynia” and “vulvo vestibulitis” without reference to the criteria above. It is also likely that the diagnosis of patients currently labeled “prostatitis” will be redefined. A minority of patients have either symptoms or signs of infection or a prostate painful to palpation. Such patients might be better viewed as suffering from chronic pelvic pain or chronic perineal pain, depending on where they feel the pain.

“NEW” CONDITIONS

A second challenge relates to the fact that, as a better understanding occurs, some conditions will become recognized as having distinct pathologies while others will move into the pain syndrome category. For example, pudendal neuralgia is becoming recognized as a pathological entity, whereas it was rarely diagnosed a few years ago. This is an example of how a collection of symptoms and signs may evolve into a better understood condition. There are several chapters on this subject. However, such prominence should not suggest that it is of any greater importance than any of
the other conditions.

“OLD” CONDITIONS REDEFINED

An example of how a condition may change from being well defined to being considered a pain syndrome would be bladder pain syndrome. There has been a move toward accepting that many patients with bladder pain do not have the cystoscopy or biopsy changes considered pathognomonic of interstitial cystitis and that they should form a part of a bladder pain syndrome group as opposed to being considered a single group under the diagnosis of interstitial cystitis, implying a single well-defined disease.

MULTISYSTEM ETIOLOGY

Further confusion stems from the fact that many conditions are probably multifactorial, involving the end organ, musculoskeletal, and nervous systems. It is the experience of most pain medicine specialists that chronic pain will involve multiple systems, even when the precipitating injury and pathology is well defined and may even have been resolved. A patient with a brachial plexus injury will develop peripheral and central neuropathic pains but will also develop muscular pain along with the symptoms and signs associated with denervation and dysfunction of the nervous system (including vascular, pseudomotor, and motor changes), and, occasionally, a dystrophic limb. Similar changes can be seen with urogenital pain. This is something that must be born in mind when managing this group of patients.
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18 Chapter 18. Loin Pain in Hematuria Syndrome


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34 Chapter 34. Musculoskeletal Causes of Pelvic Pain


35 Chapter 35. Groin Pain in Sport


36 Chapter 36. Pudendal Neuralgia: Clinical Signs and Diagnosis


Chapter 37. Pudendal Neuralgia—Treatment


FIGURE 6 The current recommended approach to treating pudendal neuralgia.


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The Therapeutic Spectrum

The final section of this book looks at some specific approaches to the management of patients with chronic/persistent pain. It looks at the therapeutic tools that are well established and how they may be applied to urogenital pain. Knowing when to apply which therapy requires a significant amount of skill and teaching. With appropriate training, many of the drug approaches can be applied early and within primary care. However, some approaches require the input of specialist clinics. The first two chapters within this section, on acute pain and cancer-related pain illustrate how some of the therapies may be employed.

As well as drugs and physical interventions, cognitive behavioral approaches need to be considered and should be used earlier rather than later.
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FIGURE 7 Pudendal nerve stimulation using Bion. The nerve localized percutaneously using special blunt dissector/stimulator. Source: Courtesy of advanced bionics.


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