Chronic Pelvic Pain and Chronic Pelvic Pain Syndrome: Classification and Epidemiology

4

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4.1 Introduction

It is a constant presence, noisy in silence, a worm that demands all attention absorbing all social energy. It is like a stubborn tormentor who torments you day and night. The only way to live would be to get rid of it, escape from captivity in which it relegates all those who suffer from it. Its name in Pain.

Pain may be defined as "*an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage*" [1]. Pain is always subjective and often is associated with actual or potential tissue damage. However, many people report pain in the absence of tissue damage or any likely pathophysiological cause. Thus, pain should be characterized by type, frequency, duration, precipitating and relieving factors and by location.

Pain is recognized as an important contributor to the global burden of disability. Although technically defined as an experience [2], pain is also a symptom and, in some cases, especially when persistent and without clear aetiology, it may be a pathologic entity of self-propagating central nervous system sensitization.

Because these sensitized central neural pathways regulate pain, sleep and mood, chronic pain in these cases can both predate and follow the development of depression, anxiety and insomnia. The term used to describe this phenomenon is controversial and evolving along with knowledge about its physiologic underpinnings garnered from functional brain imaging and neurophysiologic research [3]. "Central sensitization syndrome" (CSS) is the most general term and the one used here, although "centralized pain" also is used to describe an ongoing peripheral insult or inflammatory process resulting in sensitization of the central nervous system.

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A. Giammò, A. Biroli (eds.), *Chronic Pelvic Pain and Pelvic Dysfunctions*, Urodynamics, Neurourology and Pelvic Floor Dysfunctions,
https://doi.org/10.1007/978-3-030-56387-5_4

Fibromyalgia, chronic widespread pain, and even so-called somatoform disorders are all diagnoses reflecting central nervous system sensitization causing diffuse chronic pain without clear aetiology. Widespread hyperalgesia and allodynia often are found in these patients, but objective sensory testing is limited to research settings, and validated diagnostic values for CSS are elusive [4]. Chronic prostatitis/pelvic pain, chronic abdominal pain and irritable bowel syndrome often coexist in a patient with CSS. Actually, pain, discomfort and pressure may be part of a spectrum of abnormal sensation felt by the individual at genital, bowel and lower urinary tract level [5]. Pain produces the greatest impact on the patient and may be related to different lower urinary tract symptoms (LUTS) and can be felt before, during and/or after micturition, or to be continuous.

4.2 Definitions

When we talk about *pelvic pain* it is less well defined than, for example, bladder, urethral or perineal pain, and is less clearly related to the micturition cycle or to bowel function and is not localized to any single pelvic organ [5].

According to EAU definition [6], ***Chronic Pelvic Pain (CPP)*** is *"chronic or persistent pain perceived* in structures related to the pelvis of either men or women. It is often associated with negative cognitive, behavioural, sexual and emotional consequences as well as with symptoms suggestive of lower urinary tract, sexual, bowel, pelvic floor or gynaecological dysfunction". [*Perceived indicates that the patient and clinician, to the best of their ability from the history, examination and investigations (where appropriate) has localised the pain as being discerned in a specified anatomical pelvic area.]*

Chronic pelvic pain syndrome (CPPS) is the occurrence of CPP when there is no proven infection or other obvious local pathology that may account for the pain. It is often associated with negative cognitive, behavioural, sexual or emotional consequences, as well as with symptoms suggestive of lower urinary tract, sexual, bowel or gynaecological dysfunction. CPPS is a sub-division of CPP [6].

4.3 Classification

Much debate over the classification of CPP has occurred, is ongoing and will continue in the future. Classification involves three aspects of defining a condition: phenotyping, terminology and taxonomy [6].

Phenotyping refers to the description of all observable characteristics of any the condition, as the presence of Hunner's ulcers and glomerulation on cystoscopy that can be associated with chronic bladder pain, whereas other bladder pain conditions may have a normal appearance on cystoscopy. Irritable bowel syndrome (IBS) can present in two different phenotypes: with diarrhoea or that with constipation. Phenotyping may be based upon both known and unknown mechanisms.

Terminology is extremely complex and multiform: interstitial cystitis, painful bladder syndrome and bladder pain syndrome (BPS) were used to name the phenotype. Nowadays, the term *bladder pain syndrome* is preferred by several Societies. "Syndrome" indicates not only the crucial role of the nervous system in generating the sensations is thought to be pivotal, but also the multitude of consequences of the chronic pain: behavioural, emotional, cognitive, functional and sexual. Terms that end in *"itis"* in particular should be avoided unless infection and or inflammation is proven and considered to be the cause of the pain [7].

Taxonomy places the phenotypes into a relationship hierarchy. The EAU approach sub-divides CPP into conditions that are pain syndromes and those that are non-pain syndromes, as well-recognized pathologies (e.g., infection, neuropathy or inflammation) [6].

4.3.1 Classification of CPPS

It should be obvious to all that a condition cannot be treated unless it is defined. However, the reasons for classifying CPP go far beyond that.

As a result of systematic phenotypic and taxonomic classifications, similarities and differences between conditions become clear. Drawing comparisons between the phenotypes of different disorders allows one to compare disorders such as bladder and bowel pain syndromes, thus facilitating research and treatment.

The EAU has led the sub-divisions of the pain syndromes as follows [6]:

1. The pain syndromes are defined by a process of exclusion.
2. A sub-division phenotype should only be used if there is adequate evidence to support its use.
3. In 2004 the panel introduced the concept of managing the polysymptomatic nature of CPP, since then others have developed their own schemes, such as Nickel's UPOINT [8], modified by Magri et al. [9]. In light of these and other publications, the symptom classification table has been updated (Table 4.1).

The debate in relation to sub-dividing the pain syndromes remains ongoing. As more information is collected suggesting that the central nervous system (CNS) is involved, and indeed may be the main cause of many CPP conditions (e.g., bladder, genitalia, colorectal or myofascial), there is a general tendency to move away from end-organ nomenclature. Only time and good research will determine whether this is appropriate. To enable such research, it is essential to have a framework of classification within which to work. Any hierarchical taxonomy must be flexible to allow change. The classification has been set up according to the axis system used by IASP [1, 6].

The original EAU classification was inspired by the IASP classification [1, 6] and much work around what has become known as "pain as a disease" and its associated psychological, behavioural, sexual and functional correlates. After 10 years of work developing the initial ideas, an updated version was accepted by the IASP Council for publication in January 2012.

Table 4.1 EAU classification of chronic pelvic pain syndromes (Reproduced with permission)

Axis I Region		Axis II System	Axis III End organ as pain syndrome as identified from Hx, Ex and Ix	Axis IV Referral characteristics	Axis V Temporal characteristics	Axis VI Character	Axis VII Associated symptoms	Axis VIII Psychological symptoms
Chronic pelvic pain	Specific disease-associated pelvic pain	Urological	Prostate	Suprapubic Inguinal urethral Penile/clitoral Perineal rectal Back buttocks thighs	ONSET Acute chronic	Aching Burning stabbing Electric	UROLOGICAL Frequency Nocturia Hesitance dysfunctional flow urgency incontinence	ANXIETY About pain or putative cause of pain
			Bladder					
	OR		Scrotal testicular Epididymal		ONGOING sporadic Cyclical continuous			Catastrophic thinking about pain
	Pelvic pain syndrome		Penile urethral				GYNAECOLOGICAL Menstrual menopause	DEPRESSION Attributed to pain or impact of pain
			Post-vasectomy		TIME filling Emptying immediate post late post			
		Gynaecological	Vulvar vestibular clitoral				GASTROINTESTINAL constipation Diarrhoea Bloatedness urgency Incontinence	Attributed to Other causes
			Endometriosis-associated		TRIGGER Provoked Spontaneous			Unattributed
			CPPS with cyclical exacerbations					
			Dysmenorrhoea					
		Gastrointestinal	Irritable bowel				NEUROLOGICAL Dysaesthesia hyperaesthesia Allodynia Hyperalgesia	PTSD SYMPTOMS Re-experiencing avoidance
			Chronic anal					
			Intermittent chronic anal					
		Peripheral nerves	Pudendal pain syndrome					
		Sexological	Dyspareunia				SEXUOLOGICAL satisfaction female dyspareunia Sexual avoidance erectile dysfunction medication	
			Pelvic pain with sexual dysfunction					
		Psychological	Any pelvic organ					
		Musculoskeletal	Pelvic floor muscle abdominal muscle spinal				MUSCLE function impairment Fasciculation	
			Coccyx				CUTANEOUS trophic changes sensory changes	

Hx History, *Ex* Examination, *Ix* Investigation, *PTSD* post-traumatic stress disorder

Pain perception in CPPS may be also focused within a single organ, more than one pelvic organ and even associated with systemic symptoms such as chronic fatigue syndrome (CFS), fibromyalgia (FM) or Sjögren's syndrome. When the pain is localized to a single organ, some specialists may wish to consider using an end-organ term such as bladder pain syndrome (Table 4.2). The use of such a phrase with the terminology "syndrome" indicates that, although peripheral mechanisms may exist, CNS neuromodulation may be more important and systemic associations may occur. When the pain is localized to more than one organ site, the term CPPS should be used.

Many CPPSs are associated with a range of concurrent negative *psychological, behavioural and sexual consequences* that must be described and assessed. Examples that need to be considered are depression, anxiety, fears about pain or its implications, unhelpful coping strategies, and distress in relationships [6]. Both anxiety and depression can be significant important concomitant symptoms that are relevant to pain, disability and poor QoL. Catastrophic interpretation of pain has been shown to be a particularly salient variable, predicting patients' report of pain, disability, and poor QoL, over and above psychosocial variables such as depression or behavioural factors such as self-reported sexual dysfunction [6]. It is suggested that CPPS sometimes creates a sense of helplessness that can be reported as overwhelming, and may be associated with the refractory nature of the patients' symptoms. It is important to note that many of these biopsychosocial consequences are common to other persistent pain problems but may show varying degrees of importance for any one individual suffering from CPPS [6]. In all patients with CPPS, these consequences must be clearly described as part of the phenotype (where the term phenotype is used to indicate the observable characteristics of the syndrome).

Functional disorders, for the purpose of this document, are pathologies that have arisen secondary to changes in the control mechanisms of an organ or system [6]. That is, they are disorders characterized by disturbance of function. As an example, slow colonic transit is a functional disorder of the bowel—the normal function of the bowel is not occurring as a result of changes in the mechanisms that produce defecation, and therefore bowel control is abnormal. The term is not used in the sense of a psychiatric functional disorder. Many CPPSs are associated with functional abnormalities at a local and even systemic level. These also need to be defined as a part of the phenotype. Functional pain disorders may not express significant pathology in the organs that appear responsible for the primary symptoms, but they are associated with substantial neurobiological, physiological and sometimes anatomical changes in the CNS [6].

4.4 Dyspareunia

Dyspareunia can be described as continuous unremitting or intermittent pain associated with intercourse. It can be classified based on the location of the pain—entry or deep dyspareunia, or based on when the pain was first experienced—primary or secondary dyspareunia. There are different causes of dyspareunia and some of the

Table 4.2 Chronic pelvic pain syndromes (modified from EAU guidelines 2019) (Reproduced with permission)

1. Urological pain syndromes	**Prostate pain syndrome** Prostate pain syndrome (PPS) is a persistent or recurrent episodic pain convincingly reproduced by prostate palpation, without infection or other local pathology. PPS is often associated with negative cognitive, behavioural, sexual or emotional consequences, as well as with symptoms suggestive of lower urinary tract and sexual dysfunction. The terms "chronic prostatitis" and "prostadynia" are still used although inappropriate. Please note that some of the authors of the IASP document disagree with this term and suggest that CPPS of the male is used instead of PPS, which has been agreed by the majority
	Bladder pain syndrome Bladder pain syndrome (BPS) is the occurrence of persistent or recurrent pain perceived in the urinary bladder region, accompanied by at least one other symptom, such as pain worsening with bladder filling and daytime and/or night-time urinary frequency, without infection or other local pathology. BPS is often associated with negative cognitive, behavioural, sexual or emotional consequences, as well as with symptoms suggestive of lower urinary tract and sexual dysfunction. BPS is believed to represent a heterogeneous spectrum of disorders. There may be specific types of inflammation as a feature in subsets of patients. Localization of the pain can be difficult by examination, and consequently, another localizing symptom is required. Cystoscopy with hydrodistention and biopsy may be indicated to define phenotypes. Old terms as "interstitial cystitis", "painful bladder syndrome", and "PBS/IC" or "BPS/IC" are no longer recommended
	Scrotal pain syndrome Scrotal pain syndrome is the occurrence of persistent or recurrent episodic pain localized within the organs of the scrotum, and may be associated with symptoms suggestive of lower urinary tract or sexual dysfunction, without infection or other local pathology. Scrotal pain syndrome is often associated with negative cognitive, behavioural, sexual or emotional consequences. Scrotal pain syndrome is used when the site of the pain is not clearly testicular or epididymal, nor in the skin of the scrotum, but perceived within its contents
	Testicular pain syndrome Testicular pain syndrome is the occurrence of persistent or recurrent episodic pain perceived in the testes, and may be associated with symptoms suggestive of lower urinary tract or sexual dysfunction, without infection or other local pathology. Testicular pain syndrome is often associated with negative cognitive, behavioural, sexual or emotional consequences
	Epididymal pain syndrome Epididymal pain syndrome is the occurrence of persistent or recurrent episodic pain perceived in the epididymis, and may be associated with symptoms suggestive of lower urinary tract or sexual dysfunction, without infection or other local pathology. Epididymal pain syndrome is often associated with negative cognitive, behavioural, sexual or emotional consequences
	Penile pain syndrome Penile pain syndrome is the occurrence of pain within the penis (but not primarily in the urethra), without infection or other local pathology. Penile pain syndrome is often associated with negative cognitive, behavioural, sexual or emotional consequences, as well as with symptoms suggestive of lower urinary tract and sexual dysfunction
	Urethral pain syndrome Urethral pain syndrome is the occurrence of chronic or recurrent episodic pain perceived in the urethra, without infection or other local pathology. Urethral pain syndrome is often associated with negative cognitive, behavioural, sexual or emotional consequences, as well as with symptoms suggestive of lower urinary tract, sexual, bowel or gynaecological dysfunction. Urethral pain syndrome may occur in men and women
	Post-vasectomy scrotal pain syndrome Post-vasectomy scrotal pain syndrome is a scrotal pain syndrome that follows vasectomy, often associated with negative cognitive, behavioural, sexual or emotional consequences, as well as with symptoms suggestive of lower urinary tract and sexual dysfunction. Post-vasectomy pain may be as frequent as 1% following vasectomy, possibly more frequent. The mechanisms are poorly understood and for that reason it is considered a special form of scrotal pain syndrome

Table 4.2 (continued)

2. Gynaecological pain syndromes: External genitalia	**Vulvar pain syndrome** Vulvar pain syndrome is the occurrence of persistent or recurrent episodic vulvar pain, without infection or other local pathology. It is often associated with negative cognitive, behavioural, sexual or emotional consequences, as well as with symptoms suggestive of lower urinary tract, sexual, bowel or gynaecological dysfunction. Although pain perceived in the vulva was included under sexual disorders in the DSM-IV-R manual for classifying psychiatric disorders, there is no scientific basis for this classification, and pain perceived in the vulva is best understood as a pain problem that usually has psychological consequences. There is no evidence for its classification as a psychiatric disorder. The term "vulvodynia" used by the International Society for the Study of Vulvovaginal Disease (ISSVD) represents vulvar pain that is not accounted for by any physical findings, a "vulvar discomfort, most often described as burning pain, occurring in the absence of relevant visible findings or a specific, clinically identifiable, neurologic disorder". If physical findings are present, the patient is said to have vulvar pain due to a specified cause. The ISSVD has sub-divided vulvodynia based on pain location and temporal characteristics of the pain (e.g. provoked or unprovoked)
	Generalized vulvar pain syndrome Generalized vulvar pain syndrome refers to a vulvar pain syndrome in which the pain/burning cannot be consistently and precisely localized by point-pressure mapping via probing with a cotton-tipped applicator or similar instrument. Rather, the pain is diffuse and affects all parts of the vulva. The vulvar vestibule (the part that lies between the labia minora into which the urethral meatus and vaginal introitus open) may be involved but the discomfort is not limited to the vestibule. This pain syndrome is often associated with negative cognitive, behavioural, sexual or emotional consequences
	Localized vulvar pain syndrome Localized vulvar pain syndrome refers to pain that can be consistently and precisely 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) and can be sub-divided into: • Vestibular pain syndrome • Clitoral pain syndrome
3. Gynaecological system: Internal pelvic pain syndromes	**Endometriosis-associated pain syndrome** Endometriosis-associated pain syndrome is chronic or recurrent pelvic pain in patients with laparoscopically confirmed endometriosis, and the term is used when the symptoms persist despite adequate endometriosis treatment. It is often associated with negative cognitive, behavioural, sexual or emotional consequences, as well as with symptoms suggestive of lower urinary tract, sexual, bowel or gynaecological dysfunction. Many patients have pain above and beyond the endometriotic lesions; this term is used to cover that group of patients. Endometriosis may be an incidental finding, is not always painful, and the degree of disease seen laparoscopically does not correlate with severity of symptoms. As with other patients, they often have more than one end organ involved. It has been suggested that this phenotype should be removed from the classification because the endometriosis may be irrelevant
	Chronic pelvic pain syndrome with cyclical exacerbations Chronic pelvic pain syndrome with cyclical exacerbations covers the nongynaecological organ pain that frequently shows cyclical exacerbations (e.g., IBS or BPS) as well as pain similar to that associated with endometriosis/adenomyosis but where no pathology is identified. This condition is different from dysmenorrhoea, in which pain is only present with menstruation
	Dysmenorrhoea Dysmenorrhoea is pain with menstruation that is not associated with well-defined pathology. Dysmenorrhoea needs to be considered as a chronic pain syndrome if it is persistent and associated with negative cognitive, behavioural, sexual or emotional consequences

(continued)

Table 4.2 (continued)

4. Gastrointestinal pelvic pain syndromes irritable bowel syndrome	Irritable bowel syndrome is the occurrence of chronic or recurrent episodic pain perceived in the bowel, in the absence of proven infection or other obvious local pathology. Bowel dysfunction is frequent. IBS is often associated with worry and pre-occupation about bowel function, and negative cognitive, behavioural, sexual or emotional consequences, as well as with symptoms suggestive of lower urinary tract or gynaecological dysfunction. The above classification is based upon the Rome III Criteria [12]: 3 months of continuous or recurring symptoms of abdominal pain or irritation that may be relieved with a bowel movement, may be coupled with a change in frequency, or may be related to a change in stool consistency. Two or more of the following are present at least 25% of the time: change in stool frequency (> three bowel movements per day or < three per week); noticeable difference in stool form (hard, loose, watery or poorly formed stools); passage of mucus in stools; bloating or feeling of abdominal distension; or altered stool passage (e.g., sensation of incomplete evacuation, straining, or urgency). Extra-intestinal symptoms include: nausea, fatigue, full sensation after even a small meal, and vomiting
	Chronic anal pain syndrome Chronic anal pain syndrome is the occurrence of chronic or recurrent episodic pain perceived in the anus, in the absence of proven infection or other obvious local pathology. Chronic anal pain syndrome is often associated with negative cognitive, behavioural, sexual or emotional consequences, as well as with symptoms suggestive of lower urinary tract, sexual, bowel or gynaecological dysfunction
	Intermittent chronic anal pain syndrome Intermittent chronic anal pain syndrome refers to severe, brief, episodic pain that seems to arise in the rectum or anal canal and occurs at irregular intervals. This is unrelated to the need to or the process of defecation. It may be considered a sub-group of the chronic anal pain syndromes. It was previously known as "proctalgia fugax" but this term is no longer recommended
5. Musculoskeletal system	**Pelvic floor muscle pain syndrome** Pelvic floor muscle pain syndrome is the occurrence of persistent or recurrent episodic pelvic floor pain. There is no proven well-defined local pathology. It is often associated with negative cognitive, behavioural, sexual or emotional consequences, as well as with symptoms suggestive of lower urinary tract, sexual, bowel or gynaecological dysfunction. This syndrome may be associated with over-activity of, or trigger points within, the pelvic floor muscles. Trigger points may also be found in several muscles, such as the abdominal, thigh and paraspinal muscles and even those not directly related to the pelvis
	Coccyx pain syndrome Coccyx pain syndrome is the occurrence of chronic or recurrent episodic pain perceived in the region of the coccyx, in the absence of proven infection or other obvious local pathology. Coccyx pain syndrome is often associated with negative cognitive, behavioural, sexual or emotional consequences, as well as with symptoms suggestive of lower urinary tract, sexual, bowel or gynaecological dysfunction

most important causes include the following: vulvodynia, postpartum dyspareunia, endometriosis, inadequate vaginal lubrication or arousal, and other anogenital causes such as haemorrhoids and anal fissures.

4.5 Perineal Pain Syndrome

It is the occurrence of persistent or recurrent episodic perineal pain, which is either related to the micturition cycle or associated with symptoms suggestive of urinary tract or sexual dysfunction [6]. There is no proven infection or other obvious pathology. It is perceived in the distribution area of the pudendal nerve, and may be associated with symptoms and signs of rectal, urinary tract or sexual dysfunction. Thus, in men, the pain is localized in the area between the testicles and the anus; in women, the area between the vagina and the anus. It should be differentiated from the

pudendal neuralgia which is a specific disease associated with pelvic pain that is caused by nerve damage [6].

4.6 Epidemiology

There are insufficient data available on the epidemiology of CPP and CPPS to design a complete and correct *incidence* of this disorder.

CPP *prevalence* is comparable with global prevalence of asthma (4.3–8.6%) [10] and 1-month prevalence of low back pain (23.2 ± 2.9%) [11]. The prevalence for women in reproductive ages is between 14 and 24% and about 14% of women experience CPP at least for one time during their life [12].

Overall, CPP *prevalence* in women ranged between 5.7% and 26.6% [13]. Actually, the worldwide prevalence variation in estimation may depend on the existence and quality of studies published. There is a paucity of population-based studies especially in less developed countries and subsequently uncertainty about the burden of CPP.

Reports of *bladder pain syndrome* (BPS) prevalence have great variability because of its controversial clinical diagnosis and the method of screening. Recent reports range from 0.06% to 30% [14–22]. There is a female predominance of about 10:1 [21, 23–25] but possibly no difference in race or ethnicity [26–28]. Vulvodynia rates in BPS patients may vary from 27% to 85%, and it is always higher in case than in control subjects [29, 30]. The relative proportions of classic and non-lesion disease are unclear. There is increasing evidence that also children may be affected; therefore, BPS cannot be excluded on the basis of age [31]. BPS often coexists with other clinical conditions, showing, when compared with controls, greater prevalence of coexisting diagnoses, such as fibromyalgia, chronic fatigue syndrome or irritable bowel syndrome (IBS) [32]. Other authors also showed that women with interstitial cystitis are more likely than controls to be diagnosed with IBS or depression [33].

There is only limited information on the true prevalence of *prostate pain syndrome* (PPS) in the population. As a result of significant overlap of symptoms with other conditions (e.g. benign prostatic enlargement and BPS), purely symptom-based case definitions may not reflect the true prevalence of PPS [27, 34]. In the literature, population-based prevalence of prostatitis symptoms ranges from 1% to 14.2% [35, 36]. The risk of prostatitis increases with age (men aged 50–59 years have a 3.1-fold greater risk than those aged 20–39 years) [37].

In the 1980s, an association between CPP and sexual dysfunction was postulated. Up to 77% of women with BPS may have deep dyspareunia [38], and up to 25.6% may complain of a complete inability to have sexual intercourse because of pain [39].

In males with PPS the overall prevalence of sexual dysfunction was 49%. Erectile dysfunction (ED) is the most investigated sexual dysfunction in PPS patients. The reported prevalence of ED ranges from 15.1% to 48%, varying with evaluation tools and populations [40, 41]. The prevalence of ED was found to be higher in young men with PPS than in the general population. According to other studies men with

pelvic pain had a higher chance of suffering from ED [42, 43]. Recently, a significant correlation between "chronic prostatitis", CPP symptoms (measured by NIH-CPSI) and ED (measured by International Index of Erectile Function [IIEF]) was confirmed, while other studies using the same questionnaires were not able to confirm such a correlation [44, 45]. Some studies also report ejaculatory dysfunction, mainly premature ejaculation [40, 41, 46, 47].

Screening patients with CPP for myofascial pelvic floor pain or pelvic floor trigger points via interview and physical examination, it was found that 13.2% had pain that was related to the pelvic floor muscles (PFMs) [48].

The prevalence of PFM tenderness in those with other CPP disorders is much higher though. Prevalence of levator ani pain in a CPP clinic over a 7-year period has been found to be 22% [49]. In women with CPP, PFM tenderness was an isolated finding in 15% of these patients but was associated with other CPP disorders in 58.3% of patients versus 4.2% of healthy volunteers. Of the women in the CPP group, 89% had tenderness of the levator ani muscle, 50.8% had tenderness of the piriformis muscle, and 31.7% had tenderness of the internal obturator muscle [50].

Concerning the abdominal aspects of pelvic pain, epidemiological data on IBS and CPP are scarce [51]. The overall prevalence of anorectal pain in a sample of USA householders was 6.6% and was more common in women [52]. IBS is associated with common gynaecologic problems (endometriosis, dyspareunia, and dysmenorrhoea) [53]. Fifty per cent of women who presented with abdominal pain to the gynaecologic clinic or were scheduled for laparoscopy due to CPP had symptoms of IBS [54]. A 40% overlap of IBS in women with CPP was found [55] associated with an increased incidence of somatization. Not gynaecological surgical procedures but only psychosocial variables predict pain development without a different incidence of IBS in a prospective and controlled study [56]. Clinical features of pelvic floor dysfunction, gynaecological and psychological features are related to disordered anorectal function in IBS patients but do not predict physiological anorectal testing [6].

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