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13.1 Introduction

Knowledge of normal male sexual function and the causes of sexual dysfunction have become better understood, and more effective treatments are available. However the majority of the studies are small, short-term follow-up, case series, mainly focusing on hormonal, neurologic, psychologic and/or vascular issues [1]. Moreover, there is a lack in the field of sexual medicine research on the biologic contribution of pelvic floor disorders to different male sexual dysfunctions.

Male sexual dysfunctions include:

- Erectile dysfunction (ED)
- Diminished libido
- Abnormal ejaculation

Abnormal ejaculation includes a plethora of heterogeneous disorders, namely: premature, delayed, and retrograde ejaculation, anorgasmia and painful orgasm or male dyspareunia.

Male dyspareunia is defined as recurrent or persistent genital or pelvic pain with sexual activity or sexual dysfunction that is present for 6 months or longer, often in the absence of organic aetiology [2].

Men with pain during sexual activity represent a real challenge for practitioners because of the lack of a uniformly accepted classification and because, in the majority of cases, the aetiology of this disorder is multifactorial and includes psychological and biological issues.

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As a matter of fact, pain during sexual intercourse can represent a common symptom of different pelvic floor dysfunctions. Pelvic floor is a complex system of muscles, fascia, ligaments, bone, nerves and vascular supply; this complex system plays a crucial role in urinary, bowel and sexual function [1]. Multiple factors including nerve injury, inflammation, peripheral hyperalgesia, metabolic disorders and other pathological conditions may dramatically affect the function of an adjacent visceral organ due to viscerovisceral cross-sensitization. Coordination of reflexes and normal functioning of the urinary bladder, colon and reproductive organs are controlled not only by complex mechanisms in the spinal cord, but also involves supraspinal neural pathways. Axons of neurons in the spinal cord receiving afferent inputs from the pelvis project to the brainstem, hypothalamus and, through relay neurons, to the cortex [3]. Descending pain pathways appear to be important components in the development of visceral hyperalgesia in the pelvic area. This should be taken into account when facing with patients with pelvic floor disorders, where an organ-oriented approach can lead to a misleading diagnosis and subsequent management.

To clarify symptoms, signs and further evaluation of pelvic pain in general, the ICS working group standardized the terminology of pelvic pain in nine different domains in order to improve diagnosis and management of these disorders. In particular, the VIII domain includes sexual pain disorders that occur during sexual intercourse and can be referred to the penis, perineum or occur during ejaculation. This can lead to lack of desire, arousal, orgasm, ED and consequently to depression and relationship issues [4].

13.2 Epidemiology

Approximately 1–5% of men suffer from dyspareunia defined by patients as a painful and uncomfortable feeling during sexual intercourse [2, 5]. However it should be noticed that the low reported incidence can represent either the real uncommon occurrence of this condition or the lack of disclosure because it represents a real stigma leading to an underreported incidence in the majority of the series.

13.3 Aetiology and Symptoms

In general, male dyspareunia can be divided into four broad categories based on the suspected underlying aetiology [2]:

- Isolated ejaculatory pain
- Chronic prostatitis/chronic pelvic pain syndrome
- Medical causes
- Other causes

Isolated Ejaculatory Pain: This is a sub-type of ejaculatory dysfunction and can be idiopathic or caused by identifiable dysfunctions. Its incidence varies between 2% and 7% in men aged more than 50 and it increases when lower urinary tract symptoms (LUTS) are present. The aetiology of isolated ejaculatory pain is multifactorial and can have inflammatory, malignant, benign, surgical, iatrogenic or psychiatric origin. Sometimes it derives from ejaculatory duct obstruction [6]. Typically, pain is suprapubic, at the level of the penis, but can also occur in the lower abdomen, urethral meatus, testis and less likely at the level of the rectum [7].

Among surgical aetiology one that is worth of consideration is radical prostatectomy (RP). Indeed, data from open RP (ORP) series have shown impairments in sexual desire, orgasmic function and penile morphology after surgery. Among these conditions a non-negligible incidence of climacturia, ejaculatory pain and impaired orgasmic sensation have been reported [8–10]. Previous data have reported up to 19% of patients complaining of painful orgasm after RP [10]. A postulated theory regarding the occurrence of a muscle spasm or dystonia in the bladder neck and/or pelvic floor at the time of orgasm has been considered as the main explanation for reported post-RP painful orgasm [11] (Fig. 13.1).

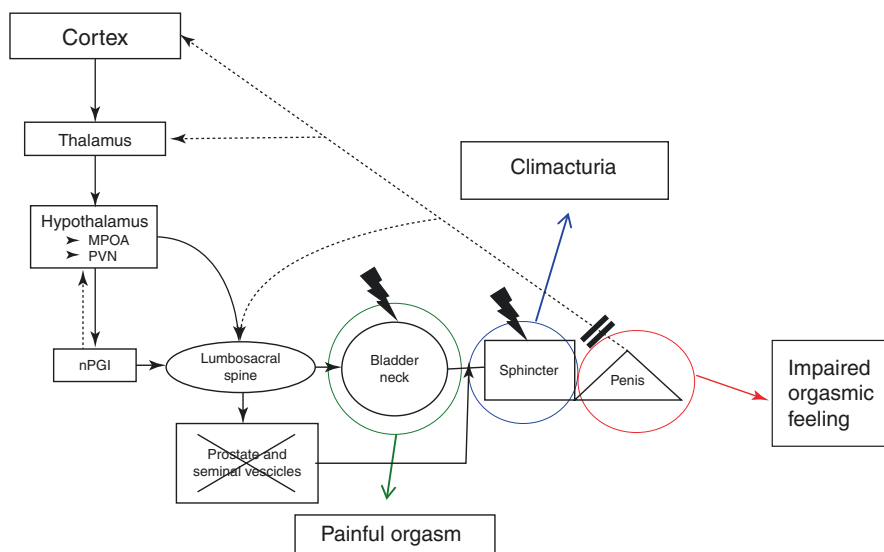


Fig. 13.1 Orgasmic alterations after radical prostatectomy [with permission from P. Capogrosso et al.] [10]

13.3.1 Chronic Prostatitis/Chronic Pelvic Pain Syndrome (CPPS)

Defined as persistent or recurrent episodic chronic pelvic pain for at least three of the preceding 6 months in the absence of other identifiable causes. Non-infectious aetiology (trauma, autoimmunity, neurogenic pain, increased prostate volume, somatic and psychologic factors) have been proposed but none has been proven.

In the majority of cases no proven infection or other obvious local pathology are found.

It is of notice that LUTS and pelvic pain due to pathologies of the prostate have always considerably affected quality of life of men of all ages [12, 13].

Sexual dysfunctions associated with CP/CPPS are not uncommon. Prevalence rates of erectile dysfunction in these men have been reported to range between 40% and 72% (difficulty with either erections or ejaculation). As a result of the pain, Aubin et al. showed that 70% of men with CPPS reported a decrease in their sexual desire, 40% increased problems with sexual function, and 29% with masturbation. Moreover, 13.5% reported having pain at ejaculation most of the time or always [14].

13.3.2 Medical Causes

Several medical causes of male dyspareunia have been described. However, data often come from small case series, low-quality studies:

- Peyronie disease (PD): acquired, localized fibrotic disorder of the tunica albuginea resulting in penile deformity, mass, pain and, in some men, erectile dysfunction. The prevalence of PD is approximately 5% in men [15].
- It can represent a psychologically and physically disabling disorder, leading to a lower quality of life. An insult (repetitive microvascular injury or trauma) to the tunica albuginea is the most widely accepted hypothesis on the aetiology. A prolonged inflammatory response will result in the remodelling of connective tissue into a fibrotic plaque [16].
- Frenulum breve: causing restriction of the glans during erection.
- Phimosis: abnormal restriction of the opening of the foreskin.
- Herniorrhaphy sequelae and pudendal nerve entrapment: mainly due to intervention along the course of genitofemoral, ileoinguinal and pudendal nerves. This pain has been reported in almost 3% of men following inguinal hernia repair [12].
- Ejaculatory duct obstruction: due to cyst of calculi.
- Genito-urinary infections.
- Chronic bladder pain: in this case, compression of the bladder during intercourses can cause an intense pain that can completely inhibit intercourse.
- Dermatologic conditions.

Other Causes: psychological traumas (history of abuse, body image issues, relationship difficulties) or medications can considerably influence sexual intercourses that can be perceived as a painful experience.

Regardless of its different possible aetiology, male dyspareunia is associated with negative cognitive, behavioural, sexual or emotional consequences, as well as with symptoms suggestive of lower urinary tract and sexual dysfunction [12].

13.4 Diagnosis and Management

Regardless of the underlying aetiology, the majority of the conditions associated with male dyspareunia can be disclosed with an accurate anamnesis, symptom assessment and physical examination. Further investigations are usually not necessary.

In particular, it is necessary to meticulously focus on sexual history, habits, presence of other urinary symptoms, psychological status, medications or previous traumas. Physical examination should focus on genital area with attention on penis, prostate, sphincters and pelvic floor muscles tone.

Laboratory studies should be performed in case of dysuria or other urinary symptoms.

The management of male dyspareunia, if possible, should be directed to its underlying cause.

It is of notice that, in the majority of cases, due to the multifactorial origin of this condition and overlapping symptoms that can be common in different pelvic floor dysfunctions, a clear underlying aetiology is hard to find. Therefore, this condition is, quite often, poorly managed.

The management of male dyspareunia requires a multimodal, symptomatic approach, knowledge of all pelvic organ systems and their association with other systems and conditions, including musculoskeletal, neurologic, urologic and psychological aspects, promoting a multidisciplinary approach.

The presence of pain associated with sexual intercourse has been linked to reduced quality of life and negative interpersonal relationships. This is of utmost importance when facing with this group of patients. If the clinician identifies psychological basis for male dyspareunia or an extremely negative impact of this condition on personal and social behaviours, a sexual counselling specialist is recommended [2].

In general, a multimodal approach to the underlying cause is recommended whenever possible.

European guidelines advocate a bio-psychological management as the management of choice for this condition with an active involvement of the patient. Single interventions rarely work in isolation. Pharmacologic and non-pharmacologic interventions should be considered with a clear understanding of the potential outcomes and endpoints. These may well include psychology, physiotherapy, drugs and more invasive interventions [12].

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