

General

Rare Mental Health Disorders Affecting Urologic Care: A Comprehensive Review

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Management of mental health illnesses and needs are important in fostering psychosocial support, interprofessional coordination, and greater adherence to treatment protocols in the field of urology. This can be especially true for mental health conditions that may greatly impact the presentation of a patient in the healthcare setting with urologic symptoms. This review describes the history, epidemiology, pathophysiology, clinical presentation, and treatment of somatic symptom disorder, illness anxiety disorder, compulsive sexual behavior/hypersexuality, factitious disorder, malingering symptoms, and conversion disorder in the realm of urology. Given the newly updated psychiatric diagnoses in the *Diagnostic and Statistical Manual of Mental Disorders*, fifth edition, there has been a lack of studies reviewing how these illnesses may present in a urology patient encounter. Additionally, as these mental health illnesses may carry a rare incidence compared to other well-known mental health illness such as generalized depression or generalized anxiety disorder, we have found that the lack of provisions and recognition of the diseases can prolong the timeline for diagnosis and lead to an increased cost in both healthcare and quality of life of patients with these mental health illnesses. This review provides awareness on these mental health conditions which may greatly impact patient history and presentation within the field of urology. Additionally, urologic care providers may have an improved understanding of interdisciplinary management of such illnesses and the common symptoms patients may present with such diseases.

INTRODUCTION

Treatment for mental health illnesses is integral to patient care as it not only affects the adherence of patient towards certain treatment protocols, but it can also affect the timeline, progress, and logistics behind provisions of patient care. With mental health illness incidence rising related to the recent coronavirus 2019 (COVID-19) pandemic, this reality is further highlighted in patient care. In this regard, one meta-analysis study concluded that 25% of adults ex-

perienced significant psychological stress from the pandemic.¹ Specifically, within the field of urology, while there has been previous work assessing mental health illnesses and its interactions with urology conditions, many of the literature has centered on patients with genitourinary conditions.² While the treatment of mental health illnesses are in the scope of psychiatrists and clinical psychologists, careful interprofessional coordination and initial spotting of mental health conditions need to be conducted by urologists. In this literature review, we hope to provide a detailed

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overview and guide on cases reported on rare mental health disorders that presented in the field of urology. Given that many of these disorders are not concentrated on the literature interacting between mental health illnesses and urology, this review provides a summary on presentation patterns of such illness and its differences from the general populace with urinary malignancies.

The objective of this manuscript, therefore, is to provide an up-to-date overview of mental health studies, findings, case presentations, and treatment modalities conducted within mental health disorders of somatic symptom disorder (SSD), illness anxiety disorder (IAD), compulsive sexual behavior (CSB) or hypersexuality, factitious disorder (FD), malingering symptoms, and conversion disorder (CD). These mental health disorders were selected as (a) they comprised of mental health illnesses that greatly affect the patient presentation and history of present illness making difficulty to reach an early diagnosis, (b) the lack of studies conducted on the review of these illnesses and how patients with the background of such illness can present in urology, and (c) the focus on establishing a standardized protocol for urologic providers if they encounter a patient with such backgrounds per cost of healthcare and quality of life for such patients. Given the recent changes from *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition to *Diagnostic and Statistical Manual of Mental Disorders*, fifth edition (DSM-5), new psychiatric disorders have also been established leading to the necessities of providing an up-to-date review of such illness presentations with the urologic space. With higher incidence of mental health illness in the post pandemic world, awareness, and early diagnosis of such mental health illnesses within the urology space may not only improve patient-provider interactions but also lead to an improvement in provisions of collaborate treatment for such patients.

SOMATIC SYMPTOM DISORDER

HISTORY AND EPIDEMIOLOGY

Somatic Symptom Disorder (SSD) is defined as the distress and/or dysfunction caused by the excessive, thoughts, feelings or behaviors related to one or more physical symptoms, by the DSM-5.³ To be diagnosed with SSD, persistent psychological disorder/dysfunction must be present because of physical symptoms for at least 6 months, whereas the physical symptoms do not need to be present for the entirety of this period.³

The prevalence of SSD is ~5-7% in the general population.^{3,4} SSD disorders can begin in childhood, adolescence or adulthood and disproportionately affects females, with an estimated 10:1 female to male ratio.⁴

PATHOPHYSIOLOGY AND RISK FACTORS

The exact pathophysiology of SSDs is not known. SSD may arise from the tendency to associate increased awareness of certain bodily sensations as an indication of a medical illness.^{4,5} There are psychological, societal, environmental, and biological risk factors associated with SSD. Childhood

neglect, sexual and physical abuse have been associated with an increased risk of psychologic and somatic problems as an adult.^{6,7} Patients who are experiencing SSD were more likely to be unemployed or occupationally impaired, with rates of 29% and 55%, in comparison to healthy patients, 15% and 14%, respectively.⁸ Another study found that patients with SSD were older, were obese, reported unhealthy lifestyle (current smoking, alcohol consumption), and were of lower educational backgrounds.⁹ Interestingly, one study identified single nucleotide polymorphisms in the HTR2A, SERPINA6, and TPH2 genes, which play a role in both serotonin and cortisol regulation, were associated with SSD.¹⁰ Another study on monozygotic and dizygotic twins demonstrated modest genetic influences (7-29%) over somatic symptoms, while the rest was attributed to environmental factors.¹¹ As a result, physicians may find it helpful to take a biopsychosocial approach in evaluating patients with potential SSDs.

CLINICAL PRESENTATION AND DIAGNOSIS

The DSM-5 defines three requirement that must be met to be diagnosed with SSD:

1. Somatic symptom(s) that cause significant distress or disruption in daily living
2. One or more thoughts, feelings, and/or behaviors that are related to the somatic symptom(s) which are persistent, excessive, associated with a high level of anxiety, and results in the devotion of excessive time and energy
3. Symptoms lasting for more than 6 months

Further, a SSD may be present in patients who: describe an inconsistent or vague history, seek out care with multiple providers for the same complaint, attribute normal sensations as an illness and/or symptoms that are not alleviated by medical intervention.¹²

It is necessary to perform a full review of systems and physical exam to evaluate the possible physical causes of the SSD.¹² Additionally, a primary care study recommends performing a thorough mental status examination due to the psychological risk factors associated with SSD.¹³

In addition to using the above criteria, the following differential diagnoses should also be considered before diagnosing a patient with SSD: depression, body dysmorphic disorders, obsessive compulsive disorder, generalized anxiety disorder, panic disorder, a substance use disorder and syndromes of unclear etiology (e.g., nonmalignant pain syndrome, chronic fatigue syndrome).^{4,14}

SOMATIC SYMPTOM DISORDER IN UROLOGY

SSDs can present in various ways in the field of urology; here we discuss numerous cases of how SSD presents as urologic pathologies. SSD can be a cause of male sexual dysfunction. Fanni, et al. found patients with SSD reported impairment of their sexuality more often, including erectile problems (spontaneous or sexual-related), low sexual desire, decreased frequency of intercourse, and perceived reduction of ejaculate volume.⁹ Interestingly, these patients

also had reduced testosterone levels and displayed signs of hypogonadism.⁹

Lower urinary tract symptoms (LUTS) and bladder dysfunction are another common urologic problem; however, physicians must take care to discern a LUTS or bladder SSD from an organic dysfunction. In a comprehensive review, von Gontard, et al. found that psychologic comorbidities are more common in patients with LUTS and that patients with a psychiatric disorder have increased rates of LUTS.¹⁵ In a retrospective review of 2300 urologic patients, Sakakibara, et al. found patients with an SSD report overactive bladder (OAB), difficulty with urination or both.¹⁶ Interestingly, the urodynamic findings were normal except for increased bladder sensation (50%) for patients reporting OAB and acontractile detrusor issues (31%) for patients reporting difficulty with urination.¹⁶

In a systematic review on LUTS in patients with depression and anxiety, Sakakibara, et al. identified that in both the depression cohort and the psychogenic bladder dysfunction cohort at a urology clinic, the most common LUTS was OAB, followed by difficult urination and infrequent voiding.¹⁷ They found the frequency of LUTS in patients with depression was only about 10% higher than aged-matched controls.¹⁷ These findings might reflect the biological changes of the depressive brain; e.g., decreases in serotonin and GABA, and possibly an increase in CRH. As such physicians should evaluate the following criteria when diagnosing a bladder/LUTS SSD from an organic disorder: (a) Situation-dependence (close association with a life event or change), (b) urodynamically increased bladder sensation/hypersensitivity, (c) absence of neurologic/organic diseases, and (d) presence of other psychologic symptoms (depression, anxiety, etc.).¹⁸

Interstitial cystitis and bladder pain syndrome (IC/BPS) can present as 6 different clinical phenotypes: urinary, psychosocial, organ-specific, infection, neurological/systemic, and tenderness. Chen, et al. in a retrospective cohort study, hypothesized that SSD, a psychosomatic disorder, could be used as a sensitive 7th clinical phenotype when diagnosing IC/BPS. They found the odds ratio for an SSD in patients with IC/BPS was 2.46 (95% confidence interval, 1.05–5.76).¹⁹ Interestingly, the average time patients with an SSD developed IC/BPS was 6.3 years; in patients with non-somatoform disorders this outcome increased to 11.5 years.¹⁹ Additionally, the cumulative survival probability was significantly increased in patients with non-somatoform disorders than those with SSD.¹⁹

Dysaesthetic penoscrotodynia (DPSD) is a disorder in which men experience distressing symptoms, commonly burning pain in their genital skin. The typical treatment is medication for neuropathic pain, but this treatment option is often unsuccessful. A multicenter study by Anyasodor, et al. sought to identify common themes in patients with DPSD to distinguish possible new treatment options.²⁰ Out of 10 patients from two different dermatology clinics, 9 had known or newly diagnosed psychopathology.²⁰ All patients in the study were offered psychodermatological treatment such as lidocaine ointments in conjugation with selective serotine reuptake inhibitors, however only 7 of the 10 pa-

tients accepted this treatment option.²⁰ Remarkably, all the patients who accepted the treatment experienced an improvement in their genital symptoms. As such, Anyasodor, et al. concluded that DPSD will likely present as an SSD and that psychodermatologic is indicated for treatment and management.²⁰

Loin pain and hematuria (LPH) is a rare disorder in urology and the etiology is ill-defined. LPH historically has been treated as a physical disorder, managed with the following options: autotransplantation, intraureteric capsaicin treatment or renal denervation. Coffman hypothesized LPH could constitute an SSD, and as such, the treatment options should be re-evaluated.²¹ A retrospective case review comparing 15 LPH patients to 10 patients with complicated renal stone disease found that the onset of pain in patients with LPH was associated with situational-dependency (a psychologically important adverse life-event) in 8 of the 15 LPH patients, but in none of the controls.²² Furthermore, LPH patients reported more instances of serious parental illness in childhood and felt responsible for causing parental illness in comparison to controls.²² As whole, these results suggest that LPH likely constitutes an SSD and physicians should perform a full psychiatric workup before proceeding with traditional treatment management for LPH.

An interesting case of pseudocyesis in a schizophrenic patient has been reported demonstrating the importance of diagnosing an SSD, when found in conjugation with other physical symptoms.²³ Pseudocyesis is a rare condition wherein a nonpregnant woman shows signs and symptoms of pregnancy, such as abdominal enlargement, cessation of menses, and even subjective sensation of fetal movement. The patient was also diagnosed with a urinary tract infection (UTI), which was complicated by acute urine retention and her schizophrenia.²³ She was treated with antibiotics and bladder catheterization, without any changes to her anti-psychotic medications.²³ Soon after being treated with bladder catheterization, her false belief of the pseudocyesis, the SSD disappeared, and the associated physical condition improved with time.²³ As such, this case demonstrated that an SSD can present as secondary to a physical disease, reinforcing the importance of taking a comprehensive history and both physical and mental exams.²³

Given the multitudes of clinical presentation patterns as discussed including sexual dysfunction, LUTS, IC/BPS, DPSD, LPH, and pseudocyesis that SSD can manifest in, it is imperative that urological providers consider the realms of socioeconomic, medical, and psychiatric history carefully before starting treatment modems.

ILLNESS ANXIETY DISORDER

HISTORY AND EPIDEMIOLOGY

Illness anxiety disorder (IAD) as defined by the DSM-5 is a psychiatric disorder characterized by excessive worry about having or developing a serious undiagnosed medical condition.³ The fear and dysfunction from IAD will persist despite a normal physical exam or laboratory results.³ The prevalence of IAD in an outpatient environment is about

0.75%, and in the general population, it is about 0.1%.²⁴ Like, SSDs it can begin in childhood, adolescence, or adulthood, however it typically worsens with age. Unlike SSD, IAD has no gender predominance.²⁴

PATHOPHYSIOLOGY AND RISK FACTORS

The exact pathophysiology of IAD, like SSD, is unknown.

CLINICAL PRESENTATION AND DIAGNOSIS

The DSM-5 has defined diagnostic criteria to help in the diagnosis of IAD. In addition to a comprehensive history and both a mental and physical examination, the following criteria can be used to diagnose IAD³:

1. Excessive worry about having or developing a debilitating or life-threatening illness.
2. Somatic symptoms are absent. If somatic symptoms are present, they are only mildly distressing to the patient. If a medical condition is present or a high-risk for developing a medical condition is present (due to family history), the anxiety regarding the medical condition (or potential impending medical condition) is excessive.
3. Excessive concern and anxiety regarding health-related issues.
4. The individual exhibits disproportionate and redundant health-related behaviors, such as repeatedly checking his or her body for indications of disease.
5. Symptoms have been present for at least 6 months
6. The illness-related preoccupation is not better explained by another psychiatric condition

Additionally, the physician making the diagnosis should define the patient in one of two ways³:

1. Care-seeking type: Medical care, including physician visits or undergoing tests and procedures, is over-utilized.
2. Care-avoidant type: Medical care is rarely used or avoided.

ILLNESS ANXIETY DISORDER IN UROLOGY

Currently, there are no published articles on “illness anxiety disorder” specifically within the field of urology, likely due to its recent classification in the DSM-5. In the DSM-4 designation, hypochondriasis combined both SSD and IAD, however now these two are distinct psychiatric disorders.³ Given the rare presentations of IAD, there are limitations in studies and case reports of IAD that has manifested in the urological field.

Generalized anxiety disorder (GAD) and other anxiety disorders have presented in the field of urology. For example, a systematic review of 12 articles demonstrated a high prevalence of erectile dysfunction (ED) in patients with an anxiety disorder and that ED may be more severe in this population.²⁵ Furthermore, a retrospective chart review of 2376 patients by Chung, et al. demonstrated there was an association between patients with an anxiety disorder and bladder pain syndrome/interstitial cystitis, the odds ratio

for bladder pain syndrome/interstitial cystitis in patients with a prior diagnosed anxiety disorder was 4.37 compared to the controls.²⁶ In a case-controlled study for chronic prostatitis/chronic pelvic pain syndrome, the two pathologies were consistently and significantly associated with a prior anxiety disorder in all age groups.²⁷

Additionally, subjects aged 40-59 years had the highest adjusted odds ratio (2.53) for prior anxiety disorder among cases compared to controls.²⁷ Although these studies do demonstrate how anxiety disorders such as GAD have a significant role and considerations in urology, more research specifically on IAD in urology need to be conducted.

COMPULSIVE SEXUAL BEHAVIOR/ HYPERSEXUALITY

HISTORY AND EPIDEMIOLOGY

Compulsive Sexual Behavior (CSB), also known as hypersexuality, is defined by recurring and extreme preoccupation with sexual behaviors, fantasies or urges that result in psychological impairment or are distressing to the individual.²⁸ In this article, CSB and hypersexuality/hypersexuality disorder will be used interchangeably.

The prevalence of CSB is not well understood due to the lack of large-scale epidemiological studies and in part due to the embarrassment, shame, and taboo felt or reported by those with CSB. However, the estimated rate of CSB is reported to be approximately 3-6%.^{29,30} The onset of hypersexuality disorder is late adolescence and the majority of patients typically seeking treatment for hypersexuality disorder are males.³¹ It is argued that the prevalence of CSB in the general population and in females is underreported due to stigma around sexual behavior.²⁹ Interestingly, in one study on hospitalized adolescents diagnosed with another psychiatric issue found that hypersexuality was more common in females than males, 8.9% versus 0%, respectively.³² As such, more epidemiological studies need to be conducted to better identify the prevalence of CSB.

PATHOPHYSIOLOGY AND RISK FACTORS

The exact pathophysiology of CSB, like SSD and IAD is also not well understood. However, there are some recurrent risk factors that have been identified in the literature. Patients with CSB often report specific moods that trigger sexual behavior, most commonly depression, happiness, and loneliness.³¹ Patients with CSB commonly have another diagnosis of a concurrent substance use disorder.^{29,31,33} People diagnosed with hypersexuality often come from a background with adverse childhood experiences such as physical/sexual abuse or being raised in a dysfunctional family setting.^{31,34}

CLINICAL PRESENTATION AND DIAGNOSIS

CSBs can present in a number of ways. There are two categories of hypersexuality disorder: paraphilic and nonparaphilic.³³ Paraphilic CSB is currently recognized by the DSM-5 as sexual behaviors deemed socially unacceptable

involving: non-consenting partners, non-human objects, suffering of oneself or partner (exhibitionism, pedophilia, etc.).³ Nonparaphilic CSB, is currently not recognized by the DSM-5, but is characterized by more typical sexual desires such as: compulsive masturbation, compulsive use of pornography, compulsive sexual acts with multiple partners, and/or fixation with a certain partner.²⁹

When making a diagnosis of CSB it is important to first rule out other medical causes for CSB. Neurological disorders, such as, Alzheimer's disease, Pick's disease, and Kleine-Levin syndrome can all illicit inappropriate behaviors or hypersexuality.²⁹ Furthermore, certain medications or drugs for example: dopamine agonists, cocaine, gamma-hydroxybutyrate and methamphetamine can cause increased sexual desires/behaviors.³⁵ If these criteria are unmet, then a diagnosis suggestive of CSB can be made.

COMPULSIVE SEXUAL BEHAVIOR/HYPERSEXUALITY IN UROLOGY

The following section looks to discuss different presentations of CSB in the field of urology to aid physicians in making the most accurate possible diagnosis. Furthermore, we will discuss possible treatment options for hypersexuality disorder.

Persistent genital arousal disorder (PGAD) is characterized by persistent feeling of unwanted genital arousal in the absence of sexual emotions or stimulation, which causes the patient distress.³⁶ Patients reported masturbation, orgasm, distraction and/or cold compresses as factors that relieve arousal.³⁷ PGAD can be caused by psychologic, pharmacologic, neurologic, or vascular issues, and it is commonly associated with other conditions, such as OAB and restless leg syndrome. Therefore, a thorough history, comprehensive physical exam, radiologic, and laboratory studies should be performed to rule out physical causes for PGAD. If these results are negative, then patients should be considered for cognitive therapy including mindfulness meditation and acceptance therapy.³⁶

Genital self-mutilation (GSM) is the intentional and direct self-mutilation of one's genitals; it is a rare phenomenon and can be categorized under CSB. It is commonly associated with a psychopathological state; a review of 173 studies identified a diagnosis of psychosis in most of the patients presenting with GSM.³⁸ Interestingly, of these patients with psychosis, the majority (89.5%) were diagnosed with schizophrenic disorder.³⁸ Following psychosis, the second most common diagnosis associated with GSM was substance use disorder with alcohol being the most common.³⁸ Currently, cognitive/psychological therapy is recommended for patients experiencing GSM.³⁸

Sexual urological emergencies present often, most commonly penile fracture which can occur in normal sexual intercourse. However, certain CSBs can also present in the emergency room.³⁹ For example, penile strangulation is an injury which results from penile constricting objects that were reportedly conducted to aid in sexual stimulation. Foreign bodies in the urinary tract/urethra are another frequent emergency case.⁴⁰ Treatment for the physical aspects of sexual urologic emergencies can range anywhere from

conservative observation to antibiotic therapy and surgical debridement/repair. It is recommended that urologists offer cognitive therapy to patients who present with a urologic emergency that resulted from a CSB.³⁹

Pedophilic disorder (PeD) is defined by the DSM-5 as a persistent sexual attraction to prepubescent children that results in distress or negative consequences.³ PeD is a type of paraphilic CSB.⁴¹ Most patients with paraphilic CSBs and PeD are at high risk for sexual crime perpetration and distress. As such, many studies have been conducted to evaluate the best pharmacological treatment protocol. In a cross-over double blinded study of 12 men convicted of sexual offenses related to PeD, ethinylestradiol and cyproterone acetate (CPA) were used in an inpatient setting as an attempted treatment to reduce sexual desires.⁴²

Both ethinylestradiol and CPA significantly reduced both the sexual interest score and the sexual activity score compared with baseline.⁴² In a study by Cooper, et al., nine men convicted of sexual crimes related to PeD randomly received either CPA or placebo treatment in a balanced design over 20 weeks.⁴³ The results indicated a significant reduction in libido and sexual behaviors to those treated with CPA versus the placebo.⁴³ Further, another study by Cooper, et al. demonstrated no clear adverse effects to treatment by CPA, apart from ejaculate content being more watery and of reduced volume.⁴⁴ Gonadotropin-Releasing Hormone (GnRH) analogs have also been evaluated as a potential treatment for reduction of pedophilic urges. In a crossover study of pharmacological augmentation therapy with leuprolide, a GnRH analog, or placebo plus psychotherapy that included five men with PeD found while being actively treated with leuprolide all subjects had a self-reported decrease in pedophilic urges and masturbation.⁴⁵ Furthermore, throughout the study penile erection measures/frequency to child stimuli were decreased at most time points.⁴⁵

Antipsychotics have also been evaluated as a treatment for PeD. In a crossover randomized clinical trial, 12 men who committed child sexual offenses were administered chlorpromazine and benperidol or placebo.⁴⁶ Benperidol was significantly more effective than chlorpromazine and placebo in reducing the sexual interest scores and sexual attitude scores.⁴⁶ The authors concluded that benperidol can be of use to reduce sexual thoughts/interests but that there was not enough evidence it could reduce sexual behaviors.⁴⁶

Besides PeD, there have also been other treatment modalities proposed for populations with CSB. Selective serotonin reuptake inhibitors have been evaluated as potential therapy for men with CSB. 28 participants were included in one study and received either citalopram or placebo in double blinded study for 12 weeks.⁴⁷ There was significant reduction in sex drive, frequency of masturbation and hours of pornography watched each week in those treated with citalopram versus placebo.⁴⁷ Patients reported delayed ejaculation but no other adverse health effects.⁴⁷ Finally, an interesting case report of 53-year old male with a history of alcohol abuse was noted with another possible treatment for hypersexuality.⁴⁸ The patient was treated with naltrex-

one at 50 mg/day for his alcohol disorder. During his treatment, the patient reported uncontrollable sexual urges for the past 2 years that were reduced after beginning treatment with naltrexone.⁴⁸ After one month on naltrexone, the patient reported decreased frequency of pornography use and masturbation.⁴⁸

Given the review of multiple potential pharmacological treatment pathways, once CSB or PeD is known in a urological patient, proper referral and coordination in multi-discipline fashion may need to be conducted.

FACTITIOUS DISORDER

HISTORY AND EPIDEMIOLOGY

Factitious disorder (FD) is a DSM-5 diagnosis characterized as an individual who intentionally falsifies physical or mental symptoms in themselves or in another person by proxy without obvious gain or reward.³ The internal gain that they achieve can vary, but oftentimes includes a desire for attention, stress coping, or enjoyment in being a “medical mystery”.⁴⁹ FD patients also enjoy the relationships gained from constantly being inside the hospital, the joy being cared for, and delight in receiving affection.^{3,49} To note, FD was previously referred to as Munchausen’s syndrome and Munchausen by proxy.³ These patients may pose a threat to their actual health by undergoing numerous unnecessary procedures or by inducing symptoms manually.⁴⁹ They often achieve this by “hospital shopping” and will often gain care at many different medical facilities.⁵⁰

PATHOPHYSIOLOGY AND RISK FACTORS

Many experts consider FD to be largely a developmental issue. The behaviors displayed are believed to be maladaptive reactions to life events, particularly during traumatic childhood experiences.⁴⁹ These patients often share similar traits and risk factors including but not limited to patients that suffered significant childhood illness, patients that had childhood trauma or abuse, and/or have current personality disorders.⁴⁹ According to many studies, some experts have described FD as a type of behavioral addiction.⁴⁹ Demographic risk factors for FD include the female sex, employment in healthcare, being unmarried, and being middle aged.⁴⁹

CLINICAL PRESENTATION AND DIAGNOSIS

In most cases, patients will present with somatic complaints the most commonly include chest pain, abdominal pain, vomiting, diarrhea, anemia, hypoglycemia, infections, seizures, weakness, headaches, vision loss, skin wounds, and arthralgias.⁵¹ It is not uncommon for the patient to purposefully induce these symptoms.⁵¹ Examples from studies include intentionally eating spoiled food, injecting insulin, picking at skin, overdosing, or not taking medications as prescribed.⁵¹ They may also forge medical records and tamper with laboratory results.⁵¹

According to the DSM-5, “the diagnosis requires evidence that the patient is taking steps to intentionally and

falsely represent a psychiatric or general medical condition without evidence of malingering, and the behavior is independent of other medical or psychiatric conditions.”^{3,51} Clues that should raise suspicion for physicians include: inconsistent information, symptoms dramatically out of proportion, symptoms that do not match physical exam results or are inconsistent with physiology, inconsistent medical records, or resistance to release medical records.⁴⁹ Diagnosing a patient with FD is difficult as it may often carry a negative connotation and requires bringing up a conversation with a patient that may deny such disorder from happening. In modern medicine, given the rarity of FD, it is oftentimes diagnosed after a careful management and workup of other physical malignancies resulting in inconsistencies that arise from patient testimonies.

FACTITIOUS DISORDER IN UROLOGY

FD has also been involved and revolved around various urological pathologies. In urological cases, FD can be further categorized as the “hemorrhagic type”, the “abdominal type” or the “neurological type.”⁵² FD has presented in many urological cases as symptoms of pneumaturia, hematuria, penile cellulitis, sepsis, syncope, and renal colics.⁵³⁻⁶⁰ These cases included patients purposefully inoculating themselves with contaminated material, ingesting warfarin, and self-mutilation.^{56,58} Oftentimes, it is extremely difficult to diagnose someone with FD unless these actions were witnessed and documented by a hospital or medical staff member. However, a diagnosis of exclusion through physical tests, review of medical/psychiatric records, and analysis of the patient’s history may assist in FD diagnosis. For example, in one case review of FD presentation via renal colics, one patient for each hospitalization complained of severe pain, gross hematuria, and fever, however these symptoms were absent at time of presentation.⁵⁹ There were claims of stone passage however stones were mysteriously lost after each presentation.⁵⁹ Eventually, after several hospitalizations and psychiatric consultations, the patient admitted in placing stones in his urethra and bladder.⁵⁹ Unfortunately, these cases have caused multiple unnecessary surgeries, invasive procedures and inappropriately used numerous hospital resources and time.^{53, 55}

FD has also been seen in FD by proxy where caretakers create artifactual hematuria, dysfunctional voiding, perineal irritation, and glucosuria of patients they are taking care of. FD by proxy can often manifest by exaggerated history, specimen contamination, and induced illness.⁶¹ Caretakers for pediatric patients have also intentionally withheld appropriately prescribed treatment or dosed the patients they are taking care of incorrectly.⁶¹ Given that medical providers assume caretakers act in the best of the child’s interest, diagnosis of FD by proxy is oftentimes delayed as significant inconsistent information is weighed before diagnosis is made. Either cases, in renal or urological manifestations of FD by proxy, providers need to report suspicions of abuse to respected protective services in the form of a report.⁶¹

Research and clinical experience show that the only effective treatment for FD is psychotherapy. If there are comorbid psychiatric illnesses, these should be treated in addition to FD. Treating underlying additional psychiatric illnesses may indirectly improve factitious behavior. The main barrier in treatment is patient willingness. It is important to confront patients and their symptoms in a professional, systemic, and scientific manner for an early diagnosis/treatment plan; accusing the patient cannot be an option as it may detract the relationship. However, it is also important to recognize that oftentimes patients with FD will deny their behavior and refuse treatment when confronted to begin with.⁴⁹ Direct confrontation rarely results in acknowledgment of the illness and instead generally ends in denial and even hostility. Instead, it can be more constructive for the physician to take an empathetic approach in which the patient is approached in a supportive manner. It is crucial to involve psychiatry.⁵¹ Management of such disorders ideally requires a team-based approach and close involvement of the primary care doctor.⁶²

MALINGERING

HISTORY AND EPIDEMIOLOGY

The definition of malingering is to pretend illness for personal gain. It is the falsification or exaggeration of physical or mental illness for external benefits. Examples of personal benefits include avoiding work, escaping responsibilities, seeking drugs, avoiding legal obligations or military service.⁶³⁻⁶⁶ They can also include seeking attention or getting out of school or work.

The DSM-5 does not consider malingering a psychiatric illness, but instead a condition needing focus of clinical attention.³ It lists malingering as part of “Nonadherence to Medical Treatment,” and states that the symptoms are intentional for external gain.^{3,66} Malingering is easily confused with FD when a patient consciously creates symptoms to assume the sick role but can be differentiated when there is obvious external gain ranging from money to avoiding duties.⁶⁶

RISK FACTORS

The racial demographics of malingering diagnosis in clinical settings have differed between clinical settings. African Americans may have a higher risk to receive the diagnosis as inpatient reports, whereas whites may have a higher risk in the ED.⁶⁷ Hispanics have the lowest likelihood of the diagnosis.⁶⁷ Given the rarity of diagnosis, there has not been a wide-scaled study conducted, however it is suspected that socioeconomic disparities of health may impact the incidence of malingering due to the need for or the presence for external gain in conducting such behavior. Patients with established personality and substance use disorder are also at higher risk of being suspected of malingering, which potentially affects the course of their treatment.⁶⁸

CLINICAL PRESENTATION AND DIAGNOSIS

The clinical presentation of malingering is different in each case. The physician needs to be conscious of certain attributes and be prudent to rule out all pathological causes. In general, malingerers will show poor compliance with treatment and stop complaining about the assumed illness only after gaining the external benefit.⁶⁶ Malingering does not have specific symptom presentations and instead it is usually suspected when someone suddenly starts having physical or psychological symptoms while patients are: being involved with a civil or criminal legal action or facing trial, facing the possibility of military combat duty, not cooperating with a doctor’s examination, in the presence of antisocial personality disorder, or when there is discrepancy between the individual’s claimed stress with objective finding.⁶⁶ It is often presented as describing symptoms as being much more intense than what a physician’s physical exam may elucidate.⁶⁶ An adequate history and physical exam are necessary to rule out pathologic cause of illness and physicians should act conservatively upon suspicion of malingering before making a diagnosis.⁶⁸ This includes a systematic collection of relevant information including a detailed chronology and scrutiny of the patient’s medical record, support from converging evidence sources, including detailed interview assessments, medical notes, and relevant non-medical investigations.⁶²

MALINGERING IN UROLOGY

Malingering is seen in all aspects of medicine including urology. Specifically in urological settings, it has been studied with the presentation of renal colic, genitourinary foreign bodies including quartz stones, and scrotal dermatitis.⁶⁹⁻⁷² Patients may typically present with a severe degree of pain to an excessive degree not expected from average patient experiences.⁷¹ The best management of malingering calls for a team-based approach and close engagement of the primary care physician due to the existence of complicating elements of medical and mental background.⁶² It is advised to not confront the patient directly or question the beliefs of the patient. The physician can help by encouraging behavioral therapy, psychotherapy, and counseling.⁶⁶ Evaluating malingering patients are also important as extra steps in treatment and management can potentially place a significant cost burden on hospitals.⁶⁰

CONVERSION DISORDER

HISTORY AND EPIDEMIOLOGY

Conversion disorder (CD), sometimes referred to as functional neurological symptom disorder, is classified by the DSM-5 as a psychiatric disorder in which neurological symptoms not related to medical or neurological diseases manifest and affect motor or sensory function.³ It is important to note that the symptoms of CD are unlikely to be controlled at will and should not be considered to have been feigned intentionally. The origin of the disorder was coined by the Austrian neurologist Sigmund Freud, who be-

lieved that the functional symptoms that were unable to be explained by existing neurological or physical medical conditions were instead the reflection of an unconscious conflict present within the patient.^{73,74} “Conversion” is used in the disorder to describe the concept that the somatic symptom exhibited by the patient represents a repressed idea or thought. The incidence of symptoms linked to CD greatly varies among the populations studied. In approximately 20-25% of patients in general hospital settings, individual symptoms of the disorder are identified, while only 5% of patients in the same setting meet the requirements for the full disorder.^{3,75} In approximately 30% of referred neurology outpatients, medically unexplained neurological symptoms were identified.⁷⁶ Out of 100 randomly selected patients from a psychiatry clinic, 24 reported unexplained neurological symptoms.⁷⁶ Adult women displayed higher rates of CD diagnoses than adult males at approximately a 2:1 to 10:1 ratio.⁷⁷ Further, it was identified that lower education and socioeconomic status were typically more at risk for developing CD.⁷⁷ However, race was not found to be a characteristic determining prevalence of CD. When comparing populations of developing countries to developed countries, the prevalence was increased by approximately 31%.⁷⁷

Other studies have examined the incidence of CD in children and adolescents concluding that the disease is rare under the age of 5 and typically occurs most often during puberty and adolescence.⁷⁸ These findings were also largely affected by population location as a study conducted in Germany identified the rates of CD among the pediatric population to be 0.2%, while a different study in Australia identified the rates among the pediatric population to be between 0.0023 and 0.0042%.^{74,79} In adolescents above the age of 10, CD was three times more likely to be present in girls than boys.^{74,79}

PATHOPHYSIOLOGY AND RISK FACTORS

According to recently created neurobiological models, CD is hypothesized to result from changes in higher-order cortical processing.⁸⁰ The general theory is that frontal and subcortical areas of the brain become activated due to emotional stress, which provides an input to the basal ganglia-thalamocortical circuits in reducing motor or conscious sensory processing. Most studies have not used large sample sizes to validate these results regarding the neural mechanisms of CD. Using fMRI or other functional neuroimaging technologies may provide additional information on the activities and areas of the brain activated for patients with CD. One such study done by Spence, et al. examined three patients with weakness secondary to CD and compared them to three normal control patients and three controls which were specifically asked by the researchers to artificially feign weakness.⁸¹ Patients were tasked with moving a joystick while undergoing PET comparisons.⁸¹ In the patients who were diagnosed with CD, decreased left dorsolateral prefrontal cortical activity was identified when the affected appendage needs to be moved.⁸¹ The results of this study suggested that patients with CD have distinct neurological activity separating them from someone

feigning the symptoms.⁸¹ A separate study conducted by Voon, et al. examined the relationship between symptom and emotion production in patients with CD.⁸² Patients were asked to perform an “emotional” task under an fMRI, which identified an abnormal relationship between supplementary motor area and the activation of the amygdala.⁸²

As such, there may be a potential neural mechanism of limbic regions influencing moral preparatory regions of the brain during arousal that may underlie motor CD symptoms.⁸²

When identifying risk factors for a neurological disease, it is vital to examine the patient’s life history. Biological, social, and psychological factors can all contribute to the development of CD. In many patients, there have often been a traumatic or adverse life events preceding the symptoms of the disorder. For example, childhood abuse, both emotionally and sexually, has been found in many patients demonstrating CD.^{74,83} Some other factors closely contributing to the disorder include internal psychological conflicts and poor coping skills. Preexisting psychiatric disorders, specifically personality, depression, and anxiety disorders, are also more likely to occur in patients with CD than patients with known neurological conditions.^{74,83} Oftentimes, issues with somatic fatigue have no clear medical attribution and can appear more frequently in CD patients.^{74,84} It is even possible for physical injury or defined neurological illnesses like strokes or migraines to “activate” the symptoms of CD.⁷⁴ Lastly, populations of lower socioeconomic status, education status, and those with rural backgrounds may have higher risk of developing CD.⁷⁴

CLINICAL PRESENTATION AND DIAGNOSIS

One of the foremost tasks in diagnosing CDs is the acquisition of an appropriate history ranging from onset of symptoms, previous treatments, and any small changes with presentation. It is also possible for patients with CD to experience repeat episodes without having been previously diagnosed. Exclusion of other major and organic diseases by identifying possible inconsistencies during the examination remains a priority; workup can include inconsistent symptoms, a significant psychiatric disorder, and/or negative labs/imaging. Also, clinicians should be wary of the patient being afflicted with comorbid neurologic disorders. DSM-5 classified CD under the umbrella category of “somatic symptom and related disorders.”³ The current criteria specifically attributed to CD in the DSM-5 denotes: at least one symptom of affected voluntary motor or sensory functions, clinical evidence of a discrepancy between the symptom and a recognized neurological or medical condition, no alternate diagnosis that better explains the symptom, and a clear and clinically significant distress that results in impairment of some form socially or occupationally or requires medical evaluation.³ If the symptoms are present for less than six months, it defines an acute episode of CD, while persistent CD is attributed to a timespan greater than six months.³ There are multiple subtypes of CD recognized by the DSM-5 including psychogenic nonepileptic seizures, paralysis or weakness, tremors, abnormal movement, gait disorder, dystonia, myoclonus, and special sensory symp-

tom with visual disturbances being the most common.³ Other psychiatric disorders including FD, SSD, IAD, and malingering act as differentials. The main differences between these other disorders are that CD patients do not intentionally create their symptoms to access care, have exaggerated responses to their symptom, and have the same level of preoccupation with their own health. General neurologic disorders may share similar features with CD; these include multiple sclerosis, epilepsy, myasthenia gravis, spinal disorders, stroke, and movement disorders.⁸⁵⁻⁸⁸ Determining the inconsistencies between the physical presentation of these conditions with the anatomical or neurologic patterns is what leads to a CD diagnosis.

CONVERSION DISORDER IN UROLOGY

As with many psychiatric disorders, using a multidisciplinary approach to closely examine their causes and symptoms provides a great deal of information for clinicians to utilize. Here, we examine cases of overlap with the field of urology. In one case by Parmar and Roberts, CD was diagnosed in a young girl who had originally been admitted on complaints of urinary retention.⁸⁹ After an initial review searching for an organic component, the patient was transferred to the psychiatry ward, where she was then identified to have been subjected to chronic sexual and physical abuse. Gandy commented on this case that “although this case illustrates a dramatic, relatively straightforward case of CD, many cases will have much less clarity with respect to etiology and outcome.”⁹⁰ As CD can “convert” psychological issues, in this case where symptoms stemmed from abuse and neglect into urological issues, establishing a means of confirming the issue with the patient and considering CD as a possible diagnosis should continue to remain on the differential for urologic providers. In another case report by Alshathri, et al., a patient was diagnosed with CD following an emergence from general anesthesia.⁹¹ The 37-year-old male patient had originally entered for a bilateral microscopic testicular sperm extraction as a case of primary infertility.⁹¹ However, after the operation, patient exhibited GCS of 3 few hours post-surgery, and after 8 hours post-operation, patient regained consciousness, was alert and oriented with coherent speech, but could not move any of his limbs or feel below the level of the neck.⁹¹ Both CT and MRI imaging of the brain and cervical spine were conducted with no evidence of acute insult; ultimately, the patient regained senses four days post-operatively and fully recovered five weeks later at a neurology follow up visit. Although not directly noted, it was possible that the region of operation may have contributed a link to the CD manifestation.

In another case, a patient presented with a number of symptoms, including urinary incontinence.⁹² The patient received several incorrect diagnoses and pharmacological treatment before workup to a psychiatrist and neurologist which diagnosed them with CD and narcissistic personality type with strong borderline components. Another study focused on psychogenic urinary dysfunction analyzed 2,300 case records over a period of 6 years.¹⁶ While the study identified 16 cases of psychogenic urinary dysfunction

among the cases, they found that amongst other somatic findings, the most common disease was CD, appearing in 6 patients.¹⁶ Given these reports, a comprehensive examination of the patient’s history and structural workup through imaging/lab results may need to be conducted before reaching the CD diagnosis.

CONCLUSION

Psychiatric evaluation for diseases such as SSDs, IADs, CSBs/hypersexuality, FDs, malingering symptoms, and CDs continue to be an important criterion to consider as a medical provider in urology. A nested case-control and retrospective cohort study has indicated somatoform disorders can increase risks for interstitial cystitis/bladder pain syndrome.¹⁹ Another report on kidney transplantation had indicated the treatment connecting with long-term emotional stress, prolonged anxiety, and increased risks for other psychiatric illnesses.⁹³ Given the close connection and the foundation of medicine that physical symptoms may manifest from psychiatric health, it is imperative that healthcare providers take a comprehensive approach in evaluating patient histories and providing preventative education.

As noted, this review highlights rare cases of psychiatric illnesses which can greatly impact the ability of a patient to provide an accurate patient history. In the cases of SSD, patients may present with a multitude of clinical presentations ranging from sexual dysfunction, LUTS, IC/BPS, DPSP, LPH, and pseudocyesis. Given the recent IAD categorization, more studies may need to be conducted for this disorder in urology. Careful history taking and treatment management of other concurrent psychiatric illnesses may assist in reducing both of these clinical presentations. For patients with CSB or PeD presenting to urology, careful coordination with medical team members including psychiatrists and counselors can assist in pointing to new pharmacological treatment available. With regards to patients with FD, FD by proxy, or patients with malingering symptoms, these diagnoses while rare, should be maintained as a differential because early catching of such presentations can not only reduce treatment costs but also catch early signs of abuse or further psychiatric illnesses. Lastly, for CD patients, urologic providers may need a comprehensive workup with imaging and coordination with other healthcare providers as it may often be mixed up with other physical manifestation etiologies and psychiatric disorders.

While these psychiatric cases may be rare in the general population, urologic providers must still maintain such diagnoses as possibilities in clinical care as patients with such pathologies may present with difficult histories for initial care and management. To further address these psychiatric pathologies in urology: increased formal education, better practice guidelines on interprofessional team coordination, a comprehensive history-taking and work-up, and an improved patient-provider relationship could positively result in an early diagnosis and treatment of such pathologies.

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