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Persistent Genital Arousal Disorder

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Review Article

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Abstract: Persistent Genital Arousal Disorder (PAGD) is an uncommon female sexual dysfunction that was first described in 2001. It is a condition that has been under-researched and not fully understood for so many years. Its prevalence is estimated to be between .5% to 6.7%, but it is believed to be under-reported because of the stigmatization of the disorder, as it is characterized by prolonged periods of persistent subjective feelings of genital arousal that are recurrent, intrusive and distressing, which usually subside by masturbation resulting in orgasm. These symptoms are not associated with sexual thoughts or urges, which prompted sex therapists and researchers to change its name from persistent sexual arousal disorder to PGAD. Now that we have a better understanding of its risk factors and pathophysiology, this review article will guide gynecologists, general practitioners and pelvic floor physiotherapists to diagnose, investigate the cause and treat patients with PGAD.

Keywords: Persistent genital arousal disorder, persistent sexual arousal disorder, Restless genital syndrome, female sexual dysfunction.

INTRODUCTION

PGAD is a disorder characterized by persistent and recurrent subjective feelings of genital arousal that are not associated with sexual desire and can be extremely distressing to the patient, to the extent that it can lead sufferers to attempt or commit suicide. Its prevalence ranges from .5% to 6.7%, and it has been under-researched and under-reported for so many years.

Patients may present with a broad spectrum of symptomatology that can include genital tingling or throbbing sensation, feelings of genital arousal or being on the verge of orgasm which can last from minutes to hours and can be intermittent or persistent. This disorder can be triggered by the initiation or withdrawal of SSRIs/SNRIs, prolonged sitting, wearing tight clothes, applying genital pressure or motor vibrations on the vulva, anxiety and stress. It can also be relieved by cold compression, exercise, distraction, mindfulness and medications. Intercourse and orgasm can both trigger and relieve the symptoms [1].

PGAD is reported to be associated with psychological disorders such as major depression (60%), panic disorder (31,6%), obsessive-compulsive disorder (24%) and history of sexual abuse, as well as somatic disorders like overactive bladder syndrome and restless leg syndrome, pudendal nerve entrapment, a Tarlov cyst or a bulging disc in the spine, dilated pelvic blood vessels, a peri-clitoral mass, Tourette's syndrome, Ehlers-Danlos syndrome, and less commonly associated with Epileptic foci, brain AV fistulas and post-stroke state. Differential diagnosis may include hyper-sexuality; which frequently involves repetitive sexual urges, fantasies or behaviours and non-distressing persistent genital arousal [1].

PGAD is believed to result mainly from an abnormal sensory information within the cauda equina that pass from Sacral spinal nerve roots innervated by the pudendal nerve, which conveys sensory messages from the clitoris, perineum, vulva and anal sphincter. This radiculopathy can result from various lumbar and or sacral pathologies such as Tarlov cyst, disc herniation, an annular tear and chronic spinal stenosis, which in turn leads to the development of the symptoms [2].

Diagnosis of PGAD is mainly based on history and physical examination. The main goal is to identify the cause and offer symptomatic or curative treatment accordingly. Diagnosis requires a detailed history of the subjective characteristics of the disorder, a thorough medical and surgical history, psychosexual assessment and medication intake history specifically antidepressants, anxiolytics and antipsychotic medications [2].

Examining the pelvic area by inspection can help rule out genital varices and common skin diseases. Testing the vulva and vestibule for sensory defects is conducted using the cotton swab (Q-tip) test. Finally, digital examination of pelvic floor muscles is done to assess levator ani muscular tension, which in turn can

bi-directionally cause pudendal nerve entrapment and tenderness [2].

Lumbo-sacral MRI is the most reliable tool to diagnose PGAD. It can detect pudendal nerve entrapment/compression, a herniated disc, a Tarlov cyst and pelvic vein varices. Doppler flow ultrasound is another modality that can also help diagnose pelvic veins varices or congestion [2].

Treatment of PGAD can be curative if designed to target the pathology causing the abnormal sensation, or symptomatic to make the disorder tolerable when no curative strategy is identified. According to Dr.Goldstein, the optimal treatment of PGAD is based on identifying the cause. Once a diagnosis has been made, medical treatment is aimed to decrease neurotransmission to inhibit abnormal sensory information. Treatment options include vareniclene (decrease dopamine action), zolpidem (potentiates GABA release), Tricyclic or SSRI antidepressants (potentiate serotonin action) and anti-seizure medications (decrease nerve transmission). In the case of pudendal nerve entrapment or compression, pudendal nerve blocks with local anesthetics and steroids can be both diagnostic and therapeutic. Surgical reduction of an inter-vertebral cyst and surgical removal of a Tarlov cyst may also result in resolution of the symptoms. Pelvic floor physical therapy, sex therapy, cognitive behavioural therapy and mindfulness have also been shown effective in treating PGAD. TENS (transcutaneous electric nerve stimulation) can reduce the symptoms by activating opioid receptors in the central nervous system [2].

In conclusion, PGAD is a female sexual dysfunction that can result from different etiologies and presents with various symptoms. It can be associated with many somatic and psychological diseases. It is hypothesized to arise mainly from a radiculopathy of sacral nerve roots within the cauda equina in the spinal cord. Diagnosis is mainly dependent upon history and physical examination. However, pelvic imaging including Doppler US and MRI are sometimes used to confirm the diagnosis. Treatment strategies can be curative or symptomatic, depending on the identified causative pathology. Indeed, more research is needed to come up with a validated diagnostic tool and a standardized treatment modality for patients diagnosed with PGAD.

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