

Persistent Genital Arousal Disorder as a Dissociative Trauma Related Condition Treated with Brainspotting – A Successful Case Report

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Rec date: Apr 21, 2015, Acc date: Jun 08, 2015, Pub date: Jun 15, 2015

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Introduction

Persistent Genital Arousal Disorder (PGAD) or Persistent Sexual Arousal Syndrome (PSAS) is characterized by excessive genital arousal for long periods of time without desire or associated sexual stimulation. Intrusive orgasms arise spontaneously and very frequently, which hinders the patient's daily routine, work and sleep and leads to significant functional impairment. This condition is unwanted by the individual and perceived as unpleasant and impossible to control. Since it was first described in 2001 [1] several potential causes have been suggested: psychological, pharmacological, neurological and vascular ones [2]. It was once believed that PGAD only affected women, but recently two cases have been described in men [3]. The embarrassment and prejudice experienced by the patient, family and sometimes even physicians delay diagnosis and treatment.

Suggested treatment strategies have also been diverse: psychotropic drugs, such as antidepressants, clonazepam [2], topiramate [4], analgesics, anti-inflammatory, transcutaneous electrical nerve stimulation (TENS), botulinum toxin [5] and electroconvulsive therapy (cases associated with severe depression and bipolar disorder) [6], hypnosis, behavioral therapy, mindfulness, meditation, acceptance therapy [7] and even clitoridectomy [8].

This is a successful case report - after informed consent - for treatment of PGAD with Brainspotting [9], a brain-based psychotherapy intervention that provides access to sensorimotor memories of traumatic activation.

Keywords: Botulinum toxin; Electroconvulsive therapy; Depression; Orgasms

Case Report

History

A young 26-year-old single, nulliparous, female sought psychiatric help to improve her "sexual symptoms". However, she felt extremely embarrassed to even describe them to a physician. She had never undergone a gynecological examination. Her symptoms had appeared 3 years before, but had become so unbearable in the last 6 months that she was unable to work. During her first consultation she agreed to provide some background information but did not detail the "symptoms".

She had been born vaginally and was the eldest of three children. She had enjoyed a childhood with healthy development and was a very active child alongside parents and sisters. She vaguely remembered being sexually abused by an uncle, a dear family member, at the age of 4. The sexual abuse had occurred repeatedly over two years or so. She reported having certain pleasure during those events, though she did

not quite understand what was happening. At 7 she learned about oral sex and spontaneously told her mother that she had experienced something like that with her uncle. Only then, upon her parents' reaction, did she understand that something bad had happened. As a consequence, her aunt broke up her marriage and expelled her husband from home.

She had grown up in an evangelical Christian family and had always been an excellent student, dear to teachers and therefore marginalized by colleagues. She had her first period at the age of 11 and remembered her early adolescence as an utterly sad period. Her behavior was melancholic, introspective and she reported having few friends. She used to spend most of her time in "her little world", either reading or writing about her feelings. Memories connected with the abuse became more vivid as she comprehended the sexual violation she had suffered and its meaning. At 13 the patient reported having her first depressive episode; she was successfully treated with sertraline, thioridazine and midazolam but experienced several side effects.

She had made plans to study psychology, but influenced by her father, she studied medicine. Although she pleased helping patients, she had trouble dealing with them and their illnesses and resented the inadequacy of health services. She would flee practical classes and that hostile world to fully concentrate on the medical books. She reported having "survived" the course by switching to an "automatic mode".

At 21 she had a car accident and sustained injuries to her skull and face and also lost some teeth. Following this event, she suffered from orthodontic complications, chronic pain and depression. She was treated with herbal medication and Citalopram and recovered, but had a lot of drowsiness.

By the time of this evaluation, though the patient had already fallen in love, she had never had a boyfriend or even kissed a boy because she believed that her "symptoms" could disrupt a relationship. Her social life was very restricted.

She had no concentration to study or work as her symptoms emerged all the time, throughout her menstrual cycle and at any time of day. She felt unable to attend courses for which she had already paid. She used to study for eight hours a day and yet at the time of this evaluation she could study no longer than one hour and a half daily.

As well as not being capable of describing her "symptoms" in detail, the patient did not want to use psychotropic medication as she had already suffered much from side effects in previous treatments.

Hypotheses and diagnosis

From the information provided by the patient it was possible to determine a history of multiple sexual abuse events at an early age,

from 4 to 6 years old approximately and two depressive episodes at 13 and when she was 21 years old. The hypotheses of Conversion Disorder or PGAD were considered on her first consultation were yet to be confirmed.

Concerning this case, we interpreted the symptom of genital hyper arousal as a conversion symptom. Conversion symptoms are dissociative symptoms that can be classified as dissociative phenomena of compartmentalization. Some examples of compartmentalization are: amnesia, paralysis, convulsive pseudo seizures, sensory loss, pseudo-hallucinations, as well as other unexplained neurological symptoms and all those so-called conversion symptoms or somatoform dissociation. According to Holmes [10], compartmentalization prevents the individual to bring a normally accessible information or registration to consciousness. The compartmentalization processes are reversible at first and continue to operate normally, but are inaccessible to voluntary control.

The hypothesis that the Conversive Disorder would correspond to PGAD as a restatement of intrusive somatosensory memories of trauma was the guiding basis for treatment with Brainspotting (BSP). The difficulties of verbalization and the patient's decision not to use psychotropic drugs were also taken into account to choose this intervention.

Brain-based treatment

Brainspotting (BSP) is considered a brain-based therapy which arises from a predominantly neurobiological stimulation with psychophysiological effects [11]. A brainspot corresponds to an oculomotor orientation associated with a neuronal network that contains stored traumatic memory that failed to be integrated. This eye orientation is found by scanning the visual field and is called the relevant eye position. When this point is accessed, the autobiographical memory circuits that were established during that traumatic experience are activated. This brainspot also resonates with somatic disorder that emerges as patients remember their traumatic experience.

Upon locating the brainspot, the patients are asked to pay full attention to their internal processes as they may arise, freely and spontaneously, while they also keep their focus on the relevant eye position that accesses their neuronal network. BSP, unlike other forms of verbal therapy, can access the components of the traumatic memory to the subcortical level in a predictable and unique way. The patient's attention to the internal process recruits medial prefrontal regions to observe emotions, memories, body sensations and cognitions related to this network. BSP facilitates sustainable observation of information files that were opened on a particular aspect into the body residues of aversive experiences which allows them to be processed to a healing resolution at the fundament of the brain's midline self-systems [9].

Regarding this specific patient, the treatment goal was address her persistent genital arousal which she preferred to call "those symptoms." When she remembered this situation, she felt a disturbance that could be described as a malaise with a sensation of discomfort in the chest and head. This disturbance had its corresponding brainspot in the visual field of the left eye above the horizontal line (relevant eye position).

The patient rated the disruption or activation level on a scale of disturbance subunits. (Subjective units of distress scale - SUDS) [12] Initially her distress reached the maximum level and it was submitted to BSP stimulus and processed until to be attenuated. (SUDS=0).

At her first session she reported extremely unpleasant bodily sensations and requested that the process be interrupted before the estimated time. We opted for a series of relaxation exercises in order to change their activation state to a more bearable level (SUDS=5).

At her second session the patient commented that she had found the previous session very unpleasant, but also reported that orgasms in the previous week had been less frequent and that she even had managed to do some physical activity. She also felt more comfortable to talk about the symptoms of genital arousal. The patient was able to better characterize both her current symptoms and early traumatic events. She remembered more clearly that the sexual abuse had begun when she was 3 years old and described them in detail in a 6-page-letter. An excerpt from the letter describing the first episode and the time when peritraumatic dissociation occurred can be found in Figure 1.

"He asked me to do it .. He put his penis out and asked me to put it in my mouth ... This happened a few times, I don't know ... but I remember, ... this time I think it was the first time. I felt disgusted and got angry and very sad, but it was like I felt nothing there (in the mouth) and don't remember (that). It was very bad.
Then (at present time) I realized it was an exchange.. I had something he wanted..."

Figure 1: Description of the first episode of sexual abuse. The peritraumatic dissociative experiences occurred during the oral sex. Even the patient at the present time is able to remember her negative feelings, at that exact time of sexual abuse she felt anesthesia in the mouth and she reports amnesia about that happening.

The patient characterized her symptoms as spontaneous orgasms which would occur more frequently at night, but that also troubled her throughout the day in such a way that prevented her from studying or working. Her private parts were swollen and painful, including her nipples. She would masturbate in a mechanical, empty way, only to relieve herself and get to sleep. She would not even tremble and faint as she did not feel any sexual desire, nor imagined anything related to sex. She also reported avoiding people. Walking or underwear rustling were very disturbing triggers, she would even remain naked at home to prevent that from happening. The sensations were inconvenient and disconnected. She did not have the will to perform any task whatsoever. She could neither sleep, nor interact with other people.

At this session there were still many unpleasant somatic sensations (SUDS=7). However, throughout the process she began to experience more pleasant reactions in her body. She compared them to the freedom she felt when she rode a bike against the wind (an activity that she had been avoiding for very long). The process continued until all somatic disorder disappeared (SUDS=0).

At her third session she was asymptomatic. She had not experienced spontaneous orgasms in the previous week. She was able work and study better. She would no longer stare into emptiness. On the next day she noticed that she had gained a different attitude at work; she would no longer allow colleagues to exploit her. At a certain night at bedtime she had many unpleasant memories of her trauma up to 5 am. She realized she had had several abusive relationships in her life and felt that she needed to talk about them. When we approached the target subject again, the patient did not report any disturbance.

After 3 BSP sessions the patient presented no symptoms of genital hyper arousal, but not believing she had fully recovered, she still

remained traditional verbal psychotherapy and took two more months to resume cycling, one of her favorite sports.

Upon realizing that her symptoms had stabilized, she scheduled her first gynecological exam. All results came back normal. The patient got another job, resumed studying for her medical residency exam, and took up English, French and guitar.

The patient was evaluated after six months and one year after BSP sessions. She did not present any new manifestation of persistent genital arousal, except when she made use of Bupropion 75 mg nine months after the intervention. Upon suspending the antidepressant, the patient returned to the asymptomatic stage. BSP sessions are summarized on Table 1. All gathered clinical information was reported here, after patient’s informed consent.

Brainspotting			
Target	Genital Hyperarousal - “those symptoms”		
Somatic disturbance	Overall malaise, discomfort in the chest and head		
Relevant eye position	Left eye above the horizontal line		
	Session 1	Session 2	Session 3
Initial SUDS	10	7	0
Final SUDS	10 (5)*	0	0
*after relaxation exercise			

Table 1: Summary of weekly sessions of Brainspotting.

Discussion

At her first evaluation, we considered PGAD as a conversion disorder, but we were only able to confirm PGAD diagnosis in the second session when the patient had detailed her symptoms more accurately. It was determined that all the diagnostic criteria for PGAD were met as described below [1,13].

(1) Characteristic signs of sexual arousal (genital fullness/swelling and high sensitivity with or without nipple erection or swelling) that persist for an extensive period of time (hours or days) and do not completely disappear.

(2) Physiological arousal signals, which can not be relieved by normal orgasmic experiences and multiple orgasms or that can take hours or days to disappear.

(3) Physiological arousal signals are not connected with any subjective feeling of arousal or sexual desire.

(4) Persistent genital arousal can be triggered not only by sexual activity, but also by non-sexual stimuli and even without any apparent stimulus.

(5) Symptoms are unbidden, intrusive and unwanted

(6) Symptoms cause at least moderate degree of distress.

This intrusive, spontaneous and unwanted character of symptoms is quite similar to the traumatic re-experience described in Post-Traumatic Stress Disorder (PTSD). Despite her history of multiple sexual abuse, this patient did not produce data that could fully meet the criteria for a diagnosis of PTSD throughout life. One possible explanation is that the diagnosis of PTSD symptoms does not value conversive dissociative symptoms as part of the diagnostic criteria, even including the new dissociative subtype created in DSM V which considers only depersonalization and derealization as dissociative symptoms [13,14]. Conversion symptoms are in general underrated by the medical community and patients tend to hide these complaints out of shame or because they have already been treated with little or no consideration.

This early trauma case also includes peritraumatic dissociation experiences described as sensory anesthesia and amnesia of event details (Table 1) that evolved into a late psychopathological condition with two depressive episodes (at 13 and 21 years old).

The peritraumatic dissociation has been related to the development of PTSD and late psychopathology and has also been considered a predictor of severity and poor response to treatment [15].

The etiology of PGAD is still unknown and there is no consensus about the factors involved in the emergence and permanence of these symptoms. PGAD in medical literature is associated with moderate and severe stress as well as with symptoms of depression, psychiatric disorders such as major depression and bipolar disorder and has also been linked to increasing intake of soy [16]. Craig [17] proposed a method consisting of five diagnostic subcategories based on the most probable etiological hypotheses: (1) pelvic hypersensitivity/sexual - there is a dramatic increase in inappropriate sexual neurological sensations causing an intense and prolonged sexual excitement; (2) variant of pelvic congestion syndrome - there is a disorganized dilation of veins in the system responsible for draining blood from the pelvic and genital organs, leading to blood congestion in these areas; (3) neurological types - both due to a neurological failure caused by a subtle lesion or an alteration in a neurotransmitter response; (4) associated with endocrine conditions – the refractory phase is either absent or minimal following orgasm or increased sexual arousal due to hormonal problems; may coincide with the onset of menopause or the first symptoms may be present at certain stages of the menstrual cycle; and (5) TEGP variant of Tourette's syndrome - associated with tics, compulsive masturbation, intrusive thoughts and family history of Tourette or similar disease or a type of obsessive compulsive disorder (OCD) presenting symptoms that are similar to PGAD. There are no specific studies on trauma and PGAD. Some cases of women suffering from PGAD and with a history of sexual abuse do not relate their symptoms to their history, although many of these patients report varying degrees of anxiety, depressive, dysphoric and even suicidal ideation symptoms [18]. This suggests that a possible dissociative phenomenon should be studied in these patients.

Concerning this case, we considered the conversive dissociative traumatic related origin hypothesis. Dissociation as a primary mechanism causing psychosomatic symptoms was observed by Nemiah [19] in traumatized individuals. These symptoms of dissociation and somatization were common and often associated. Dissociation could be a key clue to explain the traumatic origin of these symptoms. This points to the importance of seeking the history of early age trauma as well as the need to consider peritraumatic dissociation in clinical research.

This patient did not wish to use psychotropic drugs because she considered that they would cause limitations to her life. She was also unable to talk about the symptoms due to intense emotional distress. Approaches aimed at reducing symptoms deploy verbal psychotherapy techniques and often lead to unbearable traumatic re-exposure and have little impact on the integration of somatosensory memories of the self, which has its neural correlates in the midbrain. BSP first manifests itself through conscience events at the cortical level and integrates with deep subcortical records that allow healing to take place at the most basic level of the self. Clinical experience suggests that BSP can successfully access and integrate somatosensory memories of traumatic activation in a deeper level of the psyche [9].

Conclusion

Since PGAD is still considered a diagnosis under construction and is still poorly documented, this report aims to contribute to the understanding of its etiology and to point to a possible treatment for this disorder. Conversion symptoms can be understood as a somatic sensorimemory of traumatic origin. BSP intervention has proved useful for relieving disabling symptoms of patients even after 6 months and 1 year of the intervention with full remission. Trauma history and dissociative peritraumatic experiences should be carefully investigated in PGAD cases.

The authors declare no conflicts of interests.

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