ORIGINAL RESEARCH PAPER

Community Medicine

KEY WORDS: Dhat Syndrome, Cognitive oriented sex therapy.

EFFECTIVENESS OF COGNITIVE SEX THERAPY IN TREATMENT OF DHAT SYNDROME.

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ABSTRACT

Background: Dhat Syndrome is prevalent in Indian males who present with loss of vigour, somatic complaints, depressive and anxiety features, to the extent of beinghypochondrical concerns, caused by loss of semen.
Objective: The aim of the study was to determine anxiety and depression among patients diagnosed withDhat Syndrome and the effect of cognitive oriented sex therapy on anxiety and depression.
Method: Thirty-four healthy males attending psychiatry outpatient department, with complaints of loss of semen in urine or nocturnal emission (wet dreams), were assessed for depression using Hamilton Rating Scale for Depression (HAM-D) and anxiety using Hamilton Rating Scale for Anxiety (HAM-A). A model of short term cognitive focussed sex therapy was prepared. Patients were given 45 minutes sessions of therapy every week in individual setting for four weeks. During their weekly visits they were evaluated using HAM-D and HAM-A. Four patients dropped out during the group therapy. Result: There was a significant decrease in HAM-D and HAM-A scores following 4 weekly sessions of cognitive focussed sex therapy, which was statistically significant.
Conclusion: The results showed a significant improvement in depression and anxiety following cognitive oriented sex therapy and hence its usefulness in the management of Dhat syndrome.

INTRODUCTION:

Many myths are associated with human sexuality, and these are deeply ingrained in certain cultural groups due to certain culturally determined biases often leading to distressing psychological phenomenon pertaining to sexual functioning, which eventually gets translated into psychological and somatic symptoms.

Dhat Syndrome is one such disorder prevalent in Indian subcontinent. The person suffering from this perceives loss of strength and vitality, along with qualifying symptoms of depression and anxiety, and other hypochondriacal concerns caused by loss of semen by way of nocturnal emission or straining during micturition or defaecation (1). These patients also have psychosexual dysfunction(2,3).

Semen is considered an elixir of life in the mystical sense. Its preservation guarantees health, longevity, and supernatural powers (4). This intense belief often challenges the psychiatrist in terms of formulating of a treatment plan. Many authors conclude that Dhat syndrome may indeed be a culturally influenced somatoform disorder (2, 5).

Fatigue is a common symptom in Dhat syndrome (6). Disorders with fatigue as main symptom are often grouped as functional somatic disorder (7). It is an established fact that mild anxiety and depression is a part of this entity, however, sometimes these may be intense, demanding a diagnosis of major depressive disorder or generalized anxiety disorder, meeting the DSM – IV diagnostic criteria and responds to SSRIs along with counselling(8).

The psychodynamics of Dhat syndrome, makes us believe that its roots are ingrained in the cultural beliefs established over decades of folklore coupled by Ayurvedic teachings (9).

Treatment is generally aimed at controlling symptoms of depression and anxiety by psychopharmacological means, which indirectly controls the primary concern of semen loss. Semen loss is a normal physiological process of a healthy male. Hence educating patients on these lines is the logical way to treat(10), however such efforts have faced issues of patient dropping out of the therapy sometimes as early as the first consultation itself.

MATERIALS & METHOD:

Subjects from Psychiatry OPD, D Y Patil Medical College Hospital, Navi Mumbai (India).

SELECTION OF THE STUDY GROUP:

Clearance from the ethical committee was sought prior to study.

In study duration of one-year consecutive males diagnosed with Dhat syndrome were included. Non-random sampling was done. All patients attending the outpatient of the study centre who fulfilled the inclusion criteria were taken in the study. All the sessions of cognitive sex therapy were undertaken by the same therapist.

The diagnosis of Substance use, Schizophrenia, Delusional disorder and other psychotic conditions were considered as exclusion criterion.

Informed consent was obtained from those willing to participate. Thirty-four patients were enrolled of which four dropped out study. Hence 30 were considered for this study. The language of communication was hindi.

These patients were assessed for Major Depressive Disorder, Anxiety Disorders and Hypochondriasis as per DSM-IV-TR criteria.

TOOLS:

1. Hamilton Rating Scale for Depression (HAM-D) (11)
2. Hamilton Rating Scale for Anxiety (HAM-A) (12)

METHODOLOGY:

An open-ended Performa was used, to elucidate the symptoms along with mythical beliefs if any.

Individual session of sex education using a psychoeducative cognitive model was done over 45 minutes at an interval of one week for 4 weeks.

HAM-D and HAM-A, was administered to each patient on weekly basis by same investigator (to mitigate the bias.)

RESULTS:

These patients were given the designed questionnaire to understand the misconceptions about their symptoms.

Four dropped out during the course of therapy. The results including 30 patients are shown in tables 1 – 3. There was significant decrease in scores of HAM – A and HAM – D following cognitive oriented sex therapy over 4 weeks as seen in table 1, 2, 3.

DISCUSSION:

At the outset we try to understand the hypothesized symptom formation of Dhat syndrome in terms of a Psych-socio-somatic dynamics. The entity of Dhat syndrome is explained as a functional somatic symptom conglomeration by incorporating socio-cultural factors along lines of a socio-somatic model (13). This cognitive formulation is based on somatosensory amplification, misattribution and abnormal illness behaviour. In Indian culture, open discussion about sexual issues is a taboo, leading to it becoming a psychological preoccupation.Stress causes amplification of somatic symptoms with increased focus on physiological changes such as turbidity of urine and tiredness. The physiological changes are misattributed as loss of semen in the light of widely prevalent beliefs, further these beliefs are reinforced by friends and lay sources (14).

Our study reveals that patients improve significantly as far as anxiety and depression were concerned even though the primary symptom of passing white discharge in urine or wet dreams remained but did not cause any significant distress.

Although sex education has been tried with varied results, a cognitive based approach is seldom considered. A model of cognitive-behaviour-therapy with short term focused approach can come a long way in treating such patients as evidenced through our study. It may be argued that a cultural based distortion in the cognitive schemas is often hard to rectify by the treating clinician. However, with empathetic communication and taking into consideration the lack of sex education along with the cultural belief systems the patients are often receptive to a psychotherapeutic treatment modality.

CONCLUSION:

Result showed a significant improvement in depression and anxiety following cognitive focussed sex therapy and hence its usefulness in the management of Dhat syndrome.

LIMITATIONS:

There was no control group and the small study size may have skewed the findings, however these limitations can become the scope for future studies.

Long term follow-up is called for to reinforce the therapeutic effect of the treatment.

SCOPE:

The scope also lays emphasis on the need to establish the effectiveness of non-pharmacological modalities for treatment of mild anxiety and depression associated with Dhat syndrome.

TABLE 1A: DESCRIPTIVE STATISTICS FOR VARIABLES OF ANXIETY

WEEKS	NUMBER	MEAN	STD. DEVIATION	STD.ERROR MEAN
1ST	30	15.5667	3.3701	0.6153
2ND	30	9.8000	2.3547	0.4299
3RD	30	5.7667	1.4782	0.2699
4TH	30	3.5000	1.2247	0.2236

TABLE 1B: DESCRIPTIVE STATISTICS FOR VARIABLES OF DEPRESSION

WEEKS	NUMBER	MEAN	STD. DEVIATION	STD.ERROR MEAN
1ST	30	12.0000	1.8004	0.3287
2ND	30	9.0000	1.8383	0.3356
3RD	30	5.5333	1.2794	0.2336
4TH	30	3.4333	0.8976	0.1639

TABLE 2A: INDEPENDENT T- TEST AND 95%CONFIDENCE LIMITS FOR VARIABLES OF ANXIETY ONE - SAMPLE TEST

WEEKS	t	df	Sig. (2 tailed)	MEAN DIFFERNCE	95% CONFIDENCE INTERVAL OF THE DIFFERENCE	
					UPPER	LOWER
1ST	25.300	29	0.001	15.5667	14.3083	16.8251
2ND	22.795	29	0.000	9.8000	8.9207	10.6793
3RD	21.368	29	0.001	5.7667	5.2147	6.3186
4TH	15.652	29	0.001	3.5000	3.0427	3.9573

TABLE 2B: INDEPENDENT T- TEST AND 95%CONFIDENCE LIMITS FOR VARIABLES OF DEPRESSION ONE - SAMPLE TEST

WEEKS	t	df	Sig. (2 tailed)	MEAN DIFFERNCE	95% CONFIDENCE INTERVAL OF THE DIFFERENCE	
					UPPER	LOWER
1ST	36.507	29	0.001	12.0000	11.3277	12.6723
2ND	26.816	29	0.001	9.0000	8.3136	9.6864
3RD	23.689	29	0.000	5.5333	5.0556	6.0111
4TH	20.950	29	0.001	3.4333	3.0982	3.7685

TABLE 3A: ANALYSIS OF VARIANTS (ANOVA) FOR VARIABLES OF ANXIETY

VARIABLES	d.f	F-VALUE	P-VALUE	RESULT
1ST WEEK-2ND WEEK	29	34.328	0.001	SIGNIFICANT
1ST WEEK-3RD WEEK	29	58.230	0.001	SIGNIFICANT
1ST WEEK-4TH WEEK	29	45.794	0.000	SIGNIFICANT
2ND WEEK-3RD WEEK	29	42.284	0.002	SIGNIFICANT
2ND WEEK-4TH WEEK	29	48.337	0.001	SIGNIFICANT
3RD WEEK-4TH WEEK	29	34.497	0.001	SIGNIFICANT

d.f=degrees of freedom
P<.0.05=Significant
P>0.05=Not Significant
Tabulated Value=2.78

TABLE 3B: ANALYSIS OF VARIANTS (ANOVA) FOR VARIABLES OF DEPRESSION

2ND WEEK-3RD WEEK	29	41.443	0.002	SIGNIFICANT
2ND WEEK-4TH WEEK	29	36.754	0.001	SIGNIFICANT
3RD WEEK-4TH WEEK	29	31.979	0.002	SIGNIFICANT

d.f =degrees of freedom
P<.0.05=Significant
P>0.05=Not Significant
Tabulated Value=2.78

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Original Article

Effectiveness of Cognitive Oriented Sex Group Therapy in Treatment of Dhat Syndrome

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Abstract

Objective: *Dhat Syndrome is a disorder prevalent in Indian males who present with loss of vigour, other somatic complaints, depressive and anxiety features, to the extent of being hypochondrical concerns, caused by loss of semen. The aim of the study was to determine the effectiveness of Cognitive Oriented Sex Therapy in treatment of Dhat Syndrome"* ***Method:*** *Thirty four healthy males attending psychiatry outpatient department (OPD), with complaints of loss of semen in urine or as nocturnal emission (wet dreams), were assessed for depression using Hamilton Rating Scale for Depression (HAM-D) and for anxiety using Hamilton Rating Scale for Anxiety (HAM-A). A model of short term cognitive focussed sex therapy was prepared. Patients were given 45 minutes sessions of the therapy every week in a group setting for four weeks. During their weekly visits they were evaluated using HAM-D and HAM-A. Four patients dropped out during the group therapy.* ***Results:*** *There was a significant decrease in HAM-D and HAM-A scores following 4 weekly sessions (one per week) of cognitive focussed sex therapy; which was statistically significant.* ***Conclusion:*** *The results showed a significant improvement in depression and anxiety following cognitive oriented sex therapy and hence its usefulness in the management of dhat syndrome and the sexual knowledge and awareness also improved.*

Key Words: *Dhat Syndrome, Cognitive oriented sex therapy, Group sex therapy*

Introduction

Human sexuality is often colored by myths, pertaining to a particular culture often leading to disordered sexual functioning, and subsequent psychological and somatic distress.

Dhat Syndrome is one such disorder prevalent in Indian subcontinent, suffered by males who are convinced about the loss of vigor, and intense weakness, along with symptoms of depression and anxiety, and other hypochondriacal concerns caused by loss of semen by way of nocturnal emission (wet dreams) or straining during micturition or defaecation.[1] These patients may also present with or without psychosexual dysfunction.[2,3]

Seminal fluid is considered an elixir of life both in the physical and in the mystical sense. Its preservation guarantees health, longevity, and supernatural powers.[4] Often this belief is deeply ingrained much as to challenge the treating psychiatrist in terms of formulation of an effective treatment plan. Many authors have concluded with the suggestion that Dhat syndrome may indeed be a culturally influenced somatoform disorder.[2,5]

Fatigue is a common symptom in Dhat syndrome.[6] Disorders with fatigue as the main symptom are often grouped together as functional somatic disorder.[7] Although it is an established fact that mild symptoms of anxiety and depression is a

part of this syndromal entity, at times these symptoms may be of a magnitude which demands a discreet diagnostic label of major depressive disorder and/or generalized anxiety disorder. In Dhat syndrome, "the depressive phenomenology may often meet the DSM – IV diagnostic criteria for depression and responds to selective serotonin reuptake inhibitors along with regular counselling".[8] However with all its nosological vagaries, it may be worth an argument that Dhat Syndrome in all its entirety fits itself to be called a Hypochondriacal disorder, and that it derives its origin on the basis of strong cultural beliefs, it may be addressed to as a "Culture Bound Hypochondriacal Disorder".

Understanding the conceptual origin of Dhat syndrome, in itself makes us believe that its roots are deep seated into the cultural beliefs established over decades of folklore passed down over generation coupled by the tenets of Ayurvedic teachings.[9]

Treatment of Dhat Syndrome is generally aimed at controlling the symptoms of associated depression and anxiety by way of psychopharma-cological means, which also can control the primary concern of semen loss. In its true sense however semen loss is a normal physiological process of a healthy male's sexual apparatus. Educating the patient on these lines may thus be a logical way to deal with such patients,[10] however such efforts have been faced with the problem of the patient dropping out of the therapy sometimes even as early as after the first consultation itself.

This research aims to present the effectiveness of sex oriented cognitive therapy in a group setting, with an initial individual session which is also cognitively oriented.

Methods

Subjects for the study were selected from outdoor patient department of Psychiatry, D Y Patil Medical College and Hospital, Navi Mumbai (India).Ethical Clearance from the local ethical committee was taken prior to the study being undertaken.

In the study duration of one year consecutive males diagnosed with Dhat syndrome were included in the study. A non-random sampling method was used. All patients attending the outpatient department at the study centre who fulfil the inclusion criteria were taken into the study. For the ease of administration the total number of patients was divided into three groups consecutively from 1 to 10; 11 – 20 and 21 – 30. All the sessions for three groups were undertaken by the same therapist.

Patients with the diagnosis of Substance use disorder, Schizophrenia, Delusional disorder and other psychotic conditions were considered as an exclusion criterion.

An informed consent was obtained from those who were willing to participate in the study. A total of 34 patients were enrolled out of which 4 dropped out during the course of study and hence the remaining 30 were considered for this study. All patients were well versed with the English and the local language.An open ended clinical performa was used, such that it could elucidate the symptoms elaborately along with mythical beliefs of the patients. The questions were appropriately translated by the investigators, such that the patient understood them and expressed themselves elaborately.

These patients were assessed clinically for Major Depressive Disorder, Anxiety Disorders and Hypochondriasis as per the DSM-IV-TR diagnostic criteria. Tools used were: (i) Hamilton Rating Scale for Depression (HAM-D),[11] and (ii) Hamilton Rating Scale for Anxiety (HAM-A).[12] HAM-D and HAM-A, was administered to each patient individually on a weekly basis. Same investigator administered the tests, so as to mitigate the rater bias.For the ease of administration the total number of patients was divided into three groups consecutively from 1 to 10; 11 – 20 and 21 – 30. All the sessions for three groups were undertaken by the same therapist on all sessions.

An initial individual session of psycho-education (sex education) was done over 30 to 45 minutes. Subsequently 1 session per week was administered by the same therapist in a group setting, using a psychoeducative cognitive model. Weekly sessions were undertaken over four weeks; each session was of about 45 minutes duration.

Results

In line with the selection criteria 34 patients with primary complains of passing white discharge in urine or in form of wet dreams were assessed.

DAY 1:
- Patient Interviewed Based on an Open ended questionaire
- Diagnosis formulated, Patient inducted in a group of 10

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WEEK 1:
- Initiation and introduction of group of 10 patients.
- Problem highlighted and discussed HAM-A and HAM-D scores noted
- Group given cognitive oriented sex therapy.

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WEEK 2:
- Discussion of symptomatology
- Reappraisal of last session
- HAM-A and HAM-D scores noted
- Group given cognitive oriented sex therapy

⇩

WEEK 3:
- Discussion of Symptomatology
- Reappraisal of last session
- Cognitive errors delineated
- HAM-A and HAM-D scores noted
- Group given cognitive oriented sex therapy

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WEEK 4:
- Discussion of Symptomatology
- Reappraisal of last session
- Reinforcement of Therapy
- HAM-A and HAM-D scores noted
- Group given cognitive oriented sex therapy

During the course of the assessment none of the patients met all the DSM-IV-TR diagnostic criteria of Depression, Anxiety or Hypochondriasis. These patients were given the designed questionnaire to understand their misconceptions about their symptoms.Out of the 34 male patients 25 patients were in the age group of 15-25 years; 8 patients were in the age group of 25-35 years; 1 patient was

Table 1A: Descriptive statistics for variables of anxiety

weeks	number	mean	std. deviation	std.error mean
1ST	30	15.5667	3.3701	0.6153
2ND	30	9.8000	2.3547	0.4299
3RD	30	5.7667	1.4782	0.2699
4TH	30	3.5000	1.2247	0.2236

Table 1B: Descriptive statistics for variables of depression

Weeks	Number	Mean	Std. Deviation	Std. Error Mean
1ST	30	12.0000	1.8004	0.3287
2ND	30	9.0000	1.8383	0.3356
3RD	30	5.5333	1.2794	0.2336
4TH	30	3.4333	0.8976	0.1639

Table 2A: Independent t-test and 95% Confidence limits for variables of anxiety one - sample test

Weeks	t	df	Sig. (2 tailed)	Mean Diffe-rence	95% Confidence interval of the difference	
					Lower	Upper
1ST	25.300	29	0.001	15.5667	14.3083	16.8251
2ND	22.795	29	0.000	9.8000	8.9207	10.6793
3RD	21.368	29	0.001	5.7667	5.2147	6.3186
4TH	15.652	29	0.001	3.5000	3.0427	3.9573

Table 2b: independent t- test and 95%confidence limits for variables of depression

Weeks	t	df	Sig. (2 tailed)	Mean Diffe-rence	95% Confidence interval of the difference	
					Lower	Upper
1ST	36.507	29	0.001	12.0000	11.3277	12.6723
2ND	26.816	29	0.001	9.0000	8.3136	9.6864
3RD	23.689	29	0.000	5.5333	5.0556	6.0111
4TH	20.950	29	0.001	3.4333	3.0982	3.7685

Table 3a: Analysis of variants (ANOVA) for variables of anxiety

Variables	d.f	F-Value	P-Value	Result
1ST Week - 2ND Week	29	34.328	0.001	Significant
1ST Week - 3RD Week	29	58.230	0.001	Significant
1ST Week - 4TH Week	29	45.794	0.000	Significant
2ND Week - 3RD Week	29	42.284	0.002	Significant
2ND Week - 4TH Week	29	48.337	0.001	Significant
2ND Week - 4TH Week	29	48.337	0.001	Significant
2ND Week - 4TH Week	29	48.337	0.001	Significant
3RD Week - 4TH Week	29	34.497	0.001	Significant

d.f=degrees of freedom
P<.0.05=Significant; Tabulated Value=2.78

Table 3b: Analysis of variants (ANOVA) for variables of depression

Variables	d.f	F-Value	P-Value	Result
1ST Week - 2ND Week	29	35.275	0.001	Significant
1ST Week - 3RD Week	29	42.577	0.001	Significant
1ST Week - 4TH Week	29	53.253	0.000	Significant
2ND Week - 3RD Week	29	41.433	0.002	Significant
2ND Week - 4TH Week	29	36.754	0.001	Significant
3RD Week - 4TH Week	29	31.979	0.002	Significant

d.f=degrees of freedom
P<.0.05=Significant; Tabulated Value=2.78

in age group of 35-45 years. Of the 34 patients 10 were married and 24 patients were unmarried. All the patients belonged to rural background.

Of the thirty four patients recruited for study four dropped out during the course of the therapy. The results in the 30 patients included in the study are shown in Table 1 to Table 3. There was a significant decrease in the scores of HAM – A and HAM – D following the administration of the cognitive oriented sex therapy over a period of 4 weeks as seen in tables 1, 2, 3.

Discussion

At the outset we try to understand the hypothesized symptom formation of Dhat syndrome in terms of a Psych-socio-somatic dynamics. The entity of Dhat syndrome is explained as a functional somatic symptom conglomeration by incorporating societal and cultural factors along the lines of a socio-somatic model.[13] The basic cognitive formulation to explain this is based on somato-sensory amplification, misattribution and abnormal illness behaviour. In Indian culture an open discussion about sexual issues is a taboo, leading to it becoming a focus of psychological pre-occupation; stress predisposes such individuals to amplification of somatic symptoms and such health anxiety may focus their attention on physiological changes such as turbidity of urine and tiredness. In such a scenario they misattribute these physio-logical changes to loss of semen in the light of widely prevalent health beliefs. These beliefs may then be confirmed by friends and other lay sources.[14]

Our study reveals that patients improved significantly as far as the symptoms of anxiety and depression were concerned even though the primary symptom of passing white discharge in urine or wet dreams were either decreased or if present did not cause any significant distress. The frequency of wet dreams were not measured but only the scores of HAM – A and HAM – D were taken.

Although sex education has been tried with varied results, an approach which is cognitive based is seldom looked into. A model of cognitive behavior therapy with a short term focused approach can come a long way in treating such patients as evidenced through our study. It may be argued that a cultural based distortion in the cognitive schemas is often hard to rectify as often faced by the treating clinician. However with empathetic communication and taking into consideration the lack of sex education along with the cultural belief systems the patients are often receptive to a psychotherapeutic treatment modality.There were few limitations of the study. There was no control group and the study sample was small.

Conclusion

The results showed a significant improvement in depression and anxiety following cognitive focussed sex therapy and hence its usefulness in the management of dhat syndrome and the sexual knowledge and awareness also improved. It is important that there was a need to establish the effectiveness of non pharmacological modalities of treatment of mild anxiety and depression associated with Dhat syndrome.

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Case Report

Male Conversion Disorder

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Keywords : male conversion, catharsis, Jacobsons' progressive muscle relaxation

Abstract:- Conversion disorder is usually seen in females as a result of a stressor of recent origin. Here we present this case of a 21 year old male. He showed a good response to antidepressant in addition to catharsis and Jacobsons' progressive muscle relaxation (JPMR).

Introduction

Conversion disorder was referred to as "Hysteria" in older times. Conversion disorder is usually characterised with temporary symptoms affecting the motor and sensory functions. There can also be paresthesia of the limb extremities, paralysis, abnormal jerky movements, weakness, unresponsiveness, aphonia, inability to speak and blindness. Any sensory modality can be affected. The neurological system remains normal. It is usually associated with intrapsychic conflicts and stressors affecting a person.[1, 2] It is more common in women. It is more prevalence in rural and low socio economic population.

In the Diagnostic and Statistical Manual of Mental Disorders of the American Psychiatric Association, 4th edition (DSM-IV-TR), conversion disorders are included under the category Somatoform Disorders.[3]The International Classification of Diseases 10th revision (ICD-10) classifies conversion disorder as a dissociative disorder, under the F-44 category (neurotic, stress- related and somatoform disorders).[4]

Case Report

Mr. X, 21 years male, a student of engineering (2nd year), was brought to emergency with complaints of unresponsiveness, weakness and inability to speak and sit up

since last 6 hours. According to the informant patient had a fight with his family members in the morning. Patient had been alone thereafter and after few minutes started to hyperventilate. Shortly afterwards patient had complains of weakness and inability to walk or sit up. Patient stopped speaking and lay down on the floor and was unresponsive. On being brought to the emergency patient's general physical examination including the neurological examination was normal. Patient's pupillary reflex and response to painful stimuli was normal.

Oxygen saturation noted through pulse oxymetry was 99 %. Chest X ray; electrocardiogram (ECG) was normal. On being interviewed patient would occasionally open his eyes and would indicate that he can't speak or move his limbs. Patient was made to sit up with support but he slowly leaned back and lay down in bed. Patient was given Inj.Lorazepam (1 ampoule i/v) and was interviewed alone; within half an hour patient was able to talk; though the rate and volume of his speech was very low. He was able to sit up in bed on his own without support. He conveyed that he did not want to talk to his family members.

On re-examination of the neurological system there was no abnormality. On mental status examination (MSE) patient was avoiding the gaze of the physician and had downcast eyes. Mood conveyed by the patient was sad and affect was appropriate. Patient expressed ideas of helplessness and hopelessness. There were no psychotic symptoms elicited during the interview.

Past history: Patient reported to have had 3-4 similar episodes since last 2 years. There were significant inter familial conflicts. These episodes always occurred whenever some stressful event occurred at home. Patient had never taken the medications during the prior episodes and had never received any medical consultation.

There is no history of any substance abuse. No family history suggestive of psychiatric illness in his family. The birth and developmental history was normal.

Treatment

Patient was admitted and started on antidepressant tab. Sertaline 50 mg twice daily; anxiolytic tab. Clonazepam 0.5 mg thrice daily. He was referred to a clinical psychologist for assessment.

While indoors, catharsis was planned for the patient. Duration of each session was 1 hour. In the first session patient was administered with Jacobsons' progressive muscle relaxation (JPMR) and imaging technique, to bring the patient into a trance state. This was followed by catharsis. The patient during the sessions revealed the various conflicts bothering him. He revealed about his strained relation with his father and lack of support from family over the issue of an affair with a girl. After around 3 sessions patient kept on getting conversion episodes although the duration was reducing. After 5 days of indoor patient did not experience any other episodes, and hence was discharged after 1 week. On follow ups, cognitive restructuring was done once in every 15 days for 3 months. Patient was maintaining well throughout

the course of treatment without any further episodes. Patient is currently on regular follow ups since last 9 months.

Discussion

The diagnosis of conversion disorder can be delayed owing to the fear of misdiagnosis. At times the patient may also fail to give a history of any conflict or stressor involved during the interview. This could lead to unnecessary investigations and a delay in the effective treatment.

The use of antidepressants and anxiolytics is the treatment of choice for conversion. Apart from the pharmacological treatment, psychological intervention is also required. The patient can be administered with Behaviour therapy, Hypnosis.[5,6,7]Multidisciplinary approaches for treatment using specific intervention such as cognitive behaviour therapy for cognitive restructuring and behavioural modification and psychodynamic therapy to address symptoms connected to trauma can be used.[8]There should be a good rapport established between the doctor and patient for therapy to be effective.

Acute onset, identifiable conflict, early treatment, good pre-morbid personality and symptoms of paralysis, aphonia and blindness are usually good prognostic factors.History of depression, long duration of illness,symptoms of seizures and tremors are the bad prognostic factors.[9, 10, 11] Conversion disorder usually has a short course. There is a chance of about 20-25 % relapse within a year.[12]

Conclusion

The diagnosis of conversion disorder in males is generally skipped due to the gender bias associated with the disorder. So it can be misdiagnosed and the psycho-social interventions can be missed as a result. This would prolong the illness and the result of pharmacological interventions would be futile. Conversion in males should be accepted and proper diagnosis to be made in order to achieve complete bio-psycho-social intervention in the disorder.

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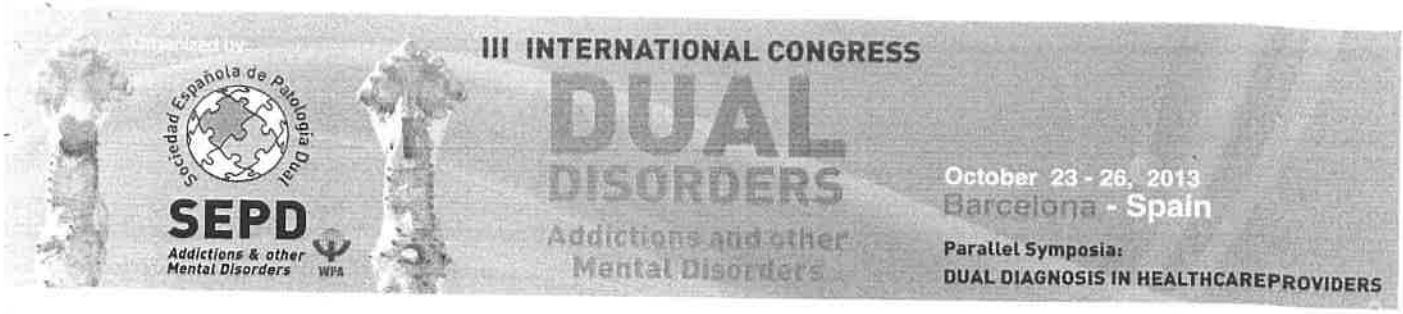

Certificate of Participation

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Prof. Miguel Casas
Congress Chairman

Dr. Carlos Roncero
Scientific Committee Coordinator

Case Report

Hypoactive sexual desire disorder caused by antiepileptic drugs

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ABSTRACT

Female sexual dysfunction is common but poorly understood sexual problem in women. Sexual dysfunction in female is multi-factorial in origin and also observed with intake of drug acting on central nervous system. This case report describes a female epileptic patient who developed sexual dysfunction with intake of antiepileptic drugs.

KEY WORDS: Antiepileptic, epilepsy, female sexual dysfunction, hypoactive sexual desire disorder

INTRODUCTION

Female sexual dysfunction (FSD) is highly prevalent but poorly understood clinical entity.[1] FSD is defined as a disorder of sexual desire, orgasm, arousal and sexual pain that results in significant personal distress.[2] A survey estimated prevalence of hypoactive sexual desire disorder (HSDD) 16%, sexual arousal disorder (lubrication) 7%, orgasmic disorder 8%, and dyspareunia 1% when FSD is associated with distress.[3]

Masters and Johnson, in 1966, was the first to describe a normal female sexual response cycle into four phases: Excitement, plateau, orgasm and resolution. While in 1979, Kaplan further divided excitement phase into desire and arousal and removed plateau phase.[2,4] Integration of psychological, neurovascular and hormonal factors is implicated in a normal female sexual response cycle. In a normal sexual response cycle, a sexual arousal result in increases blood flow to the clitoris and labia minora with subsequent engorgement of these organs. This causes protrusion of glans clitoris and eversion and engorgement of a labia minor and further increase in blood flow to vagina and uterus. In response to this, uterus and Bartholin's glands start to secrete, which provide vaginal lubrication.[2]

Initially, the Diagnostic and Statistical Manual of Mental Disorders (DSM-4) classified FSD into four categories: HSDD, female sexual arousal disorder, female orgasm disorder and pain disorder.[5] However, revised version of DSM-5 divided FSD as: Female sexual interest/arousal disorder, female orgasmic disorder, and genito-pelvic pain/penetration disorder.[6] Revised diagnostic criteria (DSM-5) for sexual dysfunction state that the disorder must be experienced 75–100% of the time with an exception of substance or medication-induced disorder, with a minimum duration of 6 months and must cause significant distress.[4,6]

Hypoactive sexual desire disorder, is now merged into female sexual interest/arousal disorder,[6] is a common type of FSD characterized by decrease in sexual desire that results in marked personal distress and/or interpersonal difficulty.[7] In female with HSDD, persistent or recurring absence of sexual fantasies and thoughts along with lack of responsiveness to sexual activity results in sexual dissatisfaction with adverse effect on quality of life.[2,4,7]

Sexual dysfunction in female is multi-factorial in origin involving anatomical, physiological, medical, psychological and social factors.[8] FSD develops commonly with pelvic surgeries, ageing, and in a postpartum period. However, medications such as antihypertensive agents, chemotherapeutic agents, antiandrogens, and drug acting on central nervous systems are also possible mediators for sexual dysfunction.[2] Studies conducted in male epileptic patients have

well documented results of association between antiepileptic drugs (AEDs) and sexual dysfunction.[9-11] However, very little is known about association between AEDs and FSD. This case report describes a female epileptic patient who developed HSDD with AEDs.

CASE REPORT

A 30-year-old married female patient came to a psychiatric outpatient department with old history of seizure disorder since 9 years. Earlier patient was on antiepileptic treatment (oxcarbazepine 150 mg twice a day and clobazam 5 mg at night) for 1-year but had poor and erratic compliance to medications. Patient was started on oral oxcarbazepine 300 mg and etizolam 0.25 mg both twice a day with clobazam 10 mg at night. After treatment for 2 months, the patient reported decreased interest in sexual desire; absent sexual thoughts along with reduce arousal and satisfaction in sexual activity. She also complained of decreased in lubrication during intercourse. The couple had satisfactory sexual activity earlier before the start of regular AEDs therapy. Her menstrual history and gynecological examination were normal. Her regular blood investigations were normal. Mental status examination revealed no active psychopathology. She had three children of which oldest daughter died 6 months after birth. Now the patient is a mother of two sons aged 7 years and 2 years. Patient denied history of any other medical illness, psychiatric illness or history of pelvic surgery.

She was diagnosed as a case of antiepileptic induced FSD, HSDD type, based on current complaints of diminished sexual desire after commencing regular AEDs therapy and after ruling out other possible etiological factors for FSD like depression or medical illness. As per revised diagnostic criteria (DSM-5) of female sexual interest/arousal disorder (previously HSDD) our patient exhibited three criteria: (1) Decreased sexual interest (2) absent sexual thoughts (3) reduce arousal, and satisfaction in sexual activity.

DISCUSSION

Sexual dysfunctions are commonly reported in epileptic patients in both male and female.[10,12] The estimated prevalence of sexual dysfunctions in epileptic patient ranges from 38% to 71%.[10] The pathogenesis of sexual dysfunction in epileptic is probably multi-factorial in origin.[12] Epilepsy itself is a well-documented cause of sexual disorders due to seizure induced alteration in concentration of sex steroid hormones.[12,13] Sexual dysfunction is also recorded due to depression associated with seizures. A feeling of poor self-esteem or fear of seizure precipitation with sexual activity lead to sexual unattractiveness.[13] Epileptic patients are more prone to develop anxiety disorders due to common involvement of nural regions (Amygdala and Hippocampus).[14] Anxiety and associated fear is also evident as one of the reason for FSD.[2] Moreover, AEDs are also identified as a significant cause of sexual dysfunction due to their effect on hormone and neuroendocrine system.[10]

Use of AEDs is the cornerstone for the management of epileptic seizures. AEDs not only reduce seizure-related risks but improve quality of life of epileptic patients. Approximately, 70% women respond well to monotherapy while remaining 30% requires a combination of two or more AEDs.[15] Mostly all AEDs have several pharmacologic targets and hence contribute to efficacy as well as side effects.[16] Thus, AEDs therapy carries a significant risk due to potential side effects, and sexual dysfunction is noted as one of them.[10,11,16]

Antiepileptic drugs contribute to sexual dysfunction either by direct cortical effect or by alteration in concentration of sex hormones.[13] AEDs especially with enzyme-inducing drugs when get metabolized in the liver increases the activity of the hepatic microsomal enzyme system (cytochrome P450). This in turn increases metabolism of sex steroid hormones and enhances production of sex hormone binding globulin (SHBG). Increase in sex hormone protein binding reduces the level of active sex hormone in blood circulation. Normal sexual function requires normal sex hormone level. However, a decrease in amount of free and biologically active sex hormones results in a reduced sexual drive in a patient on AEDs therapy.[10,13] Urso *et al.* when analyzed the data of 61 male epileptic on AEDs therapy found 36.7% developed sexual dysfunction of which 19.7% had sexual drive dysfunction.[10] A study by Herzog *et al.* compared sexual function, sex hormonal levels and gonadal efficiency in male epileptic patients on various AEDs drugs. Patients on enzyme-inducing AEDs therapy reported high SHBG and low sexual function score as compared to epileptic on lamotrigine therapy and compared to the control men.[11]

A revised diagnostic criteria (DSM 5) of female sexual interest/arousal disorder (HSDD) needs presence of three out of six diagnostic criteria. They are absent or decreased in sex related activities like sexual interest, erotic thoughts or fantasies, initiation of sexual activity or responsiveness to partner's attempts to initiate it, excitement and pleasure, response to sexual clues and genital, and nongenital sensations during sexual activity.[6] Of these six, our patient presented with three criteria of decreased sexual interest, absent sexual thoughts and reduce excitement and pleasure in sexual activity. In spite of history of chronic epilepsy (since 9 years), our patient had satisfactory sexual behavior in initial years. Patient reported symptoms of sexual dysfunction only after initiation of regular AEDs. Hence, though epilepsy is a well-established cause for sexual dysfunction, this may not

be the reason for a low sexual drive in our case. Literature mentioned depression as a cause of sexual dysfunction in epileptic patients. However, in our case, patient had normal mental status examination and no history of psychiatric illness. Our patient is on oxcarbazepine, an AED that induces liver enzymes, since a last 1-year. All these point favors as AEDs as a possible cause for low sexual desire in current case.

Hormone replacement therapy (HRT), reduction in a dose of AEDs and psychological interventions would be different choices for management of HSDD in our case. However, because of concern on AEDs drugs interactions with hormonal supplements, HRT may not be effective in our case. Second, epileptic seizures demand to continue AEDs at current doses to reduce seizure-related risks. Moreover, many AEDs are useful in management of anxiety disorders leading to sexual dysfunction. This is due to suppressive effect of AEDs on outburst of neuronal circuit having a key role in initiation of both anxiety and epileptic seizures.[14] In such scenario, psychological intervention is a better alternative to improve sex life of our patient. Individual and couple-based psychosexual therapy along with additional counseling of the partner is intended to achieve optimal outcomes.[7] Couple should be made aware of the role of foreplay and nonsexual intimacy to improve the desire and sex life.

CONCLUSION

Female on AEDs therapy can experience symptoms of sexual dysfunction due to alteration in concentration of sex steroid hormones. For persistent problem and need to continue AEDs it is necessary to reassess and reconsider the available treatment. Second, psychological interventions and awareness of the role of foreplay and nonsexual intimacy can help to improve the desire and sex life of a couple.

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Authors of Article: 1. Alexander Martin Alphonse (Corresponding author)

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