SEX ADDICTION AND SPECTRUM DISORDER.

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ABSTRACT

Disease of sex addiction has manifold presentations and variable symptomatology. Different models have been proposed to accommodate its diverse presentation. In the field of psychiatry concept of spectrum is gaining currency. When psychiatric diseases are dealt as continuum it can explain prima-facie paradoxical presentations. In this article sex addiction is described as a psychiatric illness and its manifestation can be explained under the headings of obsessive-compulsive spectrum disorder and bipolar II spectrum disorder. Both spectrum disorders not only explain different addictive behaviours but also account for associated depression seen in such patients. It is easily understood why compulsive and impulsive disorders occur as co-morbid illness. Dopamine hypothesis has been discussed to explain perplexed phenomenon of impulsivity and compulsion. Keeping this psychiatric description under consideration pharmacological remedies are suggested.

INTRODUCTION

SPECTRUM DISORDER

The concept of spectrum disorder has got diverse connotations. Different diseases may be associated on the basis of common pathological links or according to response to specific class of pharmacological agent. In the field of psychiatry, clinician at times encounters mixed picture of different diseases. These atypical presentations can be explained on the basis of spectrum disorder. In psychiatry, examples of spectrum disorders are Bipolar Affective Disorder, Obsessive Compulsive Spectrum Disorder, Schizophrenic Disorder, Panic Disorder Spectrum etc. Concept of spectrum has got unity in diversity but at the same time it can obviate important clinical demarcations. Addiction experts are making optimal use of this entity. Addiction of different types of chemicals like uppers, downers, mind benders and non-chemical addiction are classified as one disease. Striking similarities between sex addiction and psychoactive agents have been
Pathological masturbation and excessive use of pornography has gained attention of researchers. Problematic use of internet has been reported in literature of psychiatry. Some sexual behavior like that of cyber sex may be regarded as form of dependency. Unlike masturbation, cyber sex interferes with productivity of life. Both sex and drugs activate the same area of brain and there is some evidence that problem associated with psychoactive drugs may be associated with problems related to sexual behavior. In psychiatry, what addiction experts call non chemical addiction, is classified under Impulse Control Disorder, (Anorexia nervosa is one exception). DSM IV does not encompass disorders of sexual behavior except for those classified as paraphilias. Obsessive Compulsive Spectrum Disorder encompasses wide range of diseases in its fold including Impulse control disorders like Pathological Gambling, Kleptomania, Sexual Compulsion, Self Injury, Pyromania and Trichotillomania. Preoccupation with body appearance or sensation like Body Dysmorphic Disorder, Hypochondrias, Anorexia Nervosa, Depersonalization and finally Neurological disorders like Autism, Sydenham’s chorea, Torticollis, Tourette’s syndrome and Huntington’s disease.

METHOD

INCLUSION/EXCLUSION CRITERIA.
Only those articles were selected which were based on original research data and the inclusion criteria was strictly followed. Researches related to female sexuality and organic illnesses were excluded.

RESULTS.

The results from these studies indicate that sex addiction is not a discrete entity rather it is an amalgam of different psychiatric illnesses. It has not been defined properly and for that reason it has not been included in standard diagnostic manuals. It is a combination of addiction, hypersexuality, affective disorder, paraphilia, impulsivity and obsession.

DISCUSSION.

Sex addiction is discussed here as a part of spectrum disorders. Sex addiction or pathological sexuality has a long standing problem of classification. Different terms have been used to describe sex addiction. This includes Don Juanism and nymphomanias. In DSM III, a term of non paraphlic sexual addiction was used but was dropped in DSM IV. Both terms of sexual compulsivity and impulsivity have been used due to its overlap with impulsivity and compulsivity. Concept of sexual addiction has gained significance because of its parallels with addictive disorders. This discussion amply substantiates the fact that as yet, an authentic paradigm has not evolved. There is a clear need of appropriate diagnosis and treatment. For that reason changes in DSM have been proposed\textsuperscript{16}.

SEX ADDICTION

Sex addict can be defined as a person who indulges in sexual activity to cope with unmanageable stress and the frequency of this pattern keeps growing with time. The patient, mostly a male member, cannot prevent himself from having sexual thoughts and activities for any great length of time. These sexual activities are not only counter productive but also non-gratifying. Patients indulging in sex addiction, frequently face problems in maintaining a certain intimate relationship. They fail to achieve close bonding, because quality of the relationship and involvement is superficial and inadequate.\textsuperscript{10} The relationship is characterized by
expediency and mutual exploitation which are the corner stone of addictive relationship. Drugs and alcohol mask these deficiencies. Intimate needs are replaced by sexual compulsions. This leads to frequent shifting of partners and reckless sex. Person gets involved in activities like adultery, rape, incest and pedophilia, compulsive masturbation, telephonic sex, pornography and most recently, cyber sex\(^9\). Inordinate use of aphrodisiacs and recreational drugs are much commonly used by sex addicts\(^9\). At times, it results into unwanted pregnancies and contracting and spreading of sexually transmitted diseases. Unconsciously the patient tries to medicate his agony with sexual pleasure, but feelings of worthlessness and remorse flood back after culmination (orgasm) of the activity. This makes bad feelings even worse\(^{15}\). Sex addiction not only affects his family life, but also leaves a negative impact on his social relations and interferes with his occupational functioning.

One hundred years ago Krafft gave a classic description of pathological sexuality. He writes that it permeates all his thoughts and feelings, allowing no other aim in life, tumultuously and in a rut like fashion, demanding gratification without granting the possibility of moral and righteous counter presentation and resolving itself into an impulsive, insatiable succession of sexual enjoyment. This pathological sexuality is a dreadful scourge for its victim, for he is in constant danger of violating the law of state and of morality, losing his honor, his freedom even his life.\(^{21}\)

Impulsivity and compulsivity are poles apart on axis of Obsessive Compulsive Spectrum Disorder. Here we differentiate between typical features of impulsivity and compulsivity.

**COMPULSIVITY**

Harm avoidance, risk aversion, resistance, anticipatory anxiety and lack of gratification characterize compulsivity\(^{20}\). For example in compulsion of hand washing the patient wants to avoid dirt and germs. He repeatedly washes his hands but with minimal satisfaction. Though, he is aware of absurdity of his action yet, he cannot prevent himself from doing so.
IMPULSIVITY

Impulsivity includes slight anticipatory anxiety, sense of gratification, and lack of resistance in thrill seeking predispositions\textsuperscript{20}. For example, in pathological gambling the patient does not resist his urge of gambling because of excitement it provides. Patient does not harbor anxiety of risk involved; as opposed to fears found in compulsions. He enjoys his gambling which is a pleasurable activity for him. This is opposite to compulsion as excessive hand washer does not enjoy his compulsion.

Sexual addiction has a component of impulsivity with element of gratification and component of compulsivity with element of ego dystonicity. Patient of sex addiction can have associated comorbidities like OCD or tourette’s syndrome,\textsuperscript{19} or there can be associated impulsive dyscontrol problems like pathological gambling, eating disorders\textsuperscript{20} or antisocial personality disorder.

An interesting comparison is drawn between impulsive dimension and hypo manic pole and compulsive dimension and unipolar depression\textsuperscript{4}. Some overlapping cases of bipolar disorder and OCD are reported clinically. Different studies have estimated this overlapping between ranges of 10 to 16 percent. In a study by Haim et al 30 percent of OCD patients were found to develop bipolar symptoms at later stage. Very interestingly, the predominant thought content was sexual in nature in this form of OCD\textsuperscript{11}. Co morbid psychosis in patient of OCSD is substantial which explains the oddities seen in sex addicts. It becomes difficult to discriminate between a compulsive act and bizarre behavior\textsuperscript{12}. In this way OCSD, bipolar depression and sex addiction are comparable entities.

Obsessions as we know are repetitive thoughts, which coerce the person to act compulsively. As obsessions of cleanliness force repeated hand washing, like wise repetitive thoughts of sexual content lead to compulsive sexual acts. These compulsive acts are devoid of gratification. These feelings of frustration validate sense of inadequacy. Such individuals evince high levels of anxiety and stand a higher probability of developing depression, which is seen in phenomenal proportion of OCD patients. Egos of sex addicts are surrounded by
shame due to dysfunctional bonding. Sex addiction is a vicious cycle that attempts to suppress internal strife. But unfortunately it begets more shame and dysregulation of affect\textsuperscript{15} Majority of the patients turn up with obvious feelings of guilt and sense of loss of control and when such individuals try to control the irresistible urges they develop feelings of hopelessness, helplessness and worthlessness. They punish themselves unconsciously by producing somatic symptoms like pains aches, fatigue, lethargy, burning of urination, strain in muscles, loss of concentration, forgetfulness, erectile dysfunction, premature ejaculation etc. This discussion substantiates that sex addiction shares many essential features of Obsessive-Compulsive Disorder.

We have seen clinically that a lot of sex addicts with co morbid Impulse Control Disorders like pathological gambling or binge eating\textsuperscript{20}. This co relationship manifests close link between sex addiction and loss of impulse control. This phenomenon can be explained on the basis of biological model of disease. Arousal and orgasm are highly euphoric phenomenon. This euphoria is mediated by release of enkephlines and endorphins. In addiction prone person tolerance develops which forces the person to repeat the behavior more frequently in order to have equivalent euphoria. At this stage attitudes are more impulsive in nature. But in due course of time this euphoria is lost and the person starts having withdrawal symptoms: craving, anxiety, irritability, dysphoric mood etc which would obliged him to act compulsively. This is how sex addiction transforms from impulsivity to compulsivity.

Arousal and orgasm are what every person is inevitably exposed to in his life. Why some people become addict and others are spared? This question is addressed on the basis of dopamine model of addiction. According to this model, addiction prone people have lower dopaminergic tone. Dopamine is the major neurotransmitter that produces feelings of well being when it acts on nucleus accumbens and prefrontal cortex which are major reward centers in the brain. Alcohol, opiate, cannabinoids, psychostimulants, nicotine and other drugs of abuse mediate their euphoric effects through dopaminergic reward pathways by increasing synaptic level of dopamine.\textsuperscript{22} Some genetic markers have been identified in alcoholics on hereditary basis, and they are found to have low dopaminergic tone.\textsuperscript{11} Administration of dopamine agonists
like bromocriptine reduces craving for alcohol\textsuperscript{16}. It has been observed that people with low dopamine tone are more anxious, and have muscular tension, and their irritability level is higher than those with high dopamine levels\textsuperscript{2}. When they make their nerves produce more dopamine by their repeated act they in fact succeed in down grading dopamine receptors. This desensitization makes them more dependent on extra supply of dopamine. After down regulation their base line mood becomes dysphoric. Afterward their repeated activity does not produce any euphoria because D1 receptors are desensitized\textsuperscript{3}. And in the long run it only wards off withdrawal effects. Presence of stress as a trigger to addictive activity and repeated intermittent consumption of stimulating drugs leads to permanent reinforcement of certain behavioral responses (e.g. locomotive activities) This hyper response is probably due to augmentation of transmission at excitatory amino acids (EAA) synapses on dopamine neurons. A newer model is proposed which accounts for abuse and stress related altered EAA function at the level of dopamine cells in ventral tagmental area, which leaves long term changes in behavior. During stress glucocorticiod occupation also activates EAAergic system to dopamine in a manner similar to psychostimulants. This common pathway would produce abnormal dopamine response in drug free situation.\textsuperscript{17} For natural rewarding activities like sex and food dopamine is increased acutely but for a short period. This provides common basis for chemical addiction and non chemical addiction. Thus this model can be applied to sex addiction as well. This model systematically accounts for both impulsive and compulsive nature of sex addiction. Cortical glutamatergic firing is reduced which may induce impulsivity. Dopamine release brings about neuronal plasticity which may form the basis of incentive learning and long term memories that contributes to feelings craving in human addiction\textsuperscript{21}.

Associated important features of sex addiction correspond to the features of mood disorders, anxiety disorders and substance abuse disorder\textsuperscript{18}. Depression characterized by shame, guilt, despair, low self esteem, self hatred, rejection sensitivity, suicidal ideation, severe anxiety etc can be explained on parameters of bipolar axes as well. Mood spectrum includes manic phase, hypomanic phase, Mix Affective phase, Cyclothymiacs, and Hyperthymic traits. The newer concept of soft bipolar spectrum has been propounded by Perugi and Akiskal\textsuperscript{5}. Patients with soft bipolar disorder shows sub threshold depressive and hypomania
features without warranting clinical diagnosis of bipolar affective disorder. It is speculated that there is a temperamental instability that underlies the soft bipolar spectrum. Bipolar II is a distinct entity separate from bipolar I. Patient with early onset of depression of recurrent type with maladjusted coping pattern, marital discord and/or break ups, anti social activities like drug addiction and sex addiction were proved to be Bipolar II \(^4\) (Kathrine). During elation they are hypersexual and reckless but during depressive phase they become what experts call sex anorexic. But even in this phase their thoughts revolve around themes of sexuality. This is not very unusual because 23.3 percent of depressed male patients show increased libido\(^6\). About 78 percent of patients with atypical depression meet criterion for soft bipolar. Despite their depression they resort to sexual activities to relieve their depression. They suffer at the hand of depression in physical, emotional and spiritual sense. At the end patient blames sex for every trouble. Hence, entity of soft bipolar which is a combination of atypical depression with co morbid anxiety and impulsivity, explain many aspects of sex addiction.

**CLINICAL IMPLICATIONS**

By considering sex addiction as a part of spectrum disorders we can use different pharmacological agents for its treatment. If element of OCD is dominant then SSRI be of great benefit. SSRI’s are first line treatment for atypical depression as well. But unfortunately patient tends to relapse or continue to complain about depression when he is put on maintenance dose. Most of the time dose has to be increased \(^18\). This is a typical response of impulse disorder where therapeutic effects tend to diminish and relapses are very common\(^19\). This article is not a new model but an attempt to describe sexual addiction as a part of spectrum disorders.

**LIMITATIONS**

1. No well defined parameters of sex addiction are available.
2. There is paucity of statistical analysis.
3. There were no pharmacological interventional strategies available.
4. The concept of spectrum disorder has been vaguely defined and has not gained strong footing in psychiatry.

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