

# DHAT SYNDROME AND CO-MORBID DISORDERS: A CROSS-SECTIONAL STUDY

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## ABSTRACT

**Objective:** To analyse the phenomenology and comorbidity of Dhat syndrome.

**Design:** Cross-sectional study.

**Subjects and Methods:** A total of 50 male patients attending psychosexual clinic of a tertiary care hospital in Delhi was performed. Data comprised of 40 patients of Dhat syndrome with or without impotence or premature ejaculation, six with premature ejaculation only, and four were suffering from only impotence.

**Results:** The commonest associated psychiatric illness was mixed anxiety and depressive disorder (40.0 %) followed by generalized anxiety disorder (20.0%), while 24 % did not receive a psychiatric diagnosis. The commonest associated medical illness was urinary tract infections (UTI) which affected 24 % of study subjects followed by sexually transmitted diseases (STDs) which occurred in 10 % of the subjects. The common presenting symptoms of Dhat syndrome were weakness (78%), fatigue (71%), palpitations (66%), and sleeplessness (64%).

**Conclusions:** Dhat syndrome is commonly associated with mixed anxiety and depressive disorder and urinary tract infections (UTI) in terms of psychiatric and medical illness respectively. Dhat syndrome commonly presents with weakness, fatigue, palpitations and sleeplessness.

**Key Words:** Dhat syndrome, Anxiety, Depression, Culture bound syndrome.

## INTRODUCTION

Dhat syndrome is a true culture-bound sex neurosis, quite common in the natives of the Indian subcontinent<sup>1-11</sup>. The word 'Dhat' derives from the Sanskrit word 'Dhatu', which according to the Susruta Samhita (an ancient treatise on Indian medicine), means the elixir that constitutes the body. It is suggested in the Susruta Samhita and in Ayurveda (the Indian system of medicine) that disturbances in the 'Dhatu's results in an increased susceptibility to physical and mental disease. Of the seven types of 'Dhatu's described, semen is considered to be the most important.

Akhtar<sup>12</sup> refers to the religious scriptures of the Hindus, according to which 40 meals produce one drop of blood, 40 drops of blood give rise to one drop of bone marrow, and 40 drops of marrow form one drop of semen.

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This gives rise to the belief that the loss of semen from the body in any manner like by masturbation, spermatorrhoea, and nocturnal emission, pre-marital or extramarital sexual relations is harmful, while its preservation guarantees health and longevity<sup>13</sup>.

Thus the belief in the precious and life-preserving properties of semen is deeply ingrained in Indian culture. Practitioners of traditional systems of medicine reinforce this belief, to their own profit, and the belief may be perpetuated by the friends or relatives who had suffered from the syndrome<sup>14</sup>.

According to a survey in northern India<sup>15</sup>, 48% of rural and 23% of college samples viewed masturbation or excessive sex as positively harmful and believed that it could lead to mental illness. In the same study, 21% of the rural sample and 45% of the college sample agreed that it caused physical debility but were not sure whether it could cause mental illness.

In an interesting study from Sri Lanka, De Silva & Dissanayake<sup>15</sup> observed that in their cohort of 38 men recruited from a clinic where they had presented with sexual dysfunction, semen loss was given as a major causative factor by the men themselves. These men believed that excessive loss of semen led to sexual dysfunction and physical symptoms and thus was harmful. A majority of individuals reported continuing loss of semen over a period ranging from 6 months to 20 years. More than half were found to have somatic symptoms; 53% received a diagnosis of anxiety neurosis, 40% of hypochondriasis and 5% of stress reaction.

Dhat syndrome, a term first used by Wig in 1960<sup>2</sup>, is a commonly recognized clinical entity in Indian culture. It consists of vague somatic symptoms (fatigue, weakness, anxiety, loss of appetite, guilt, etc.), and at times sexual dysfunction (impotence or premature ejaculation), which the patient attributes to the passing of semen (Dhat) in urine as a direct consequence of his excessive indulgence in masturbation or sexual intercourse. Sometimes, an overvalued idea that the semen has become foul smelling and less viscous, may present<sup>12</sup>. The syndrome is also widespread in Nepal, Sri Lanka, Bangladesh and Pakistan<sup>3</sup>.

The patient perceives the slightest turbidity in urine with great perturbation. He is typically more likely to be married or recently married, of average or low socio-economic status (perhaps a student, labourer or farmer by occupation), comes from a rural area, and belongs to a family with conservative attitudes towards sex<sup>12, 15, 17</sup>. Factors such as literacy and religion have been found to be unimportant<sup>15</sup>.

This syndrome has not been studied in recent past. We conducted a study to identify the various sociodemographic features and clinical profile of patients with Dhat syndrome along with comorbid psychiatric, sexual and medical disorders. The knowledge and attitudes of patients towards Dhat syndrome were also studied.

## SUBJECTS AND METHODS

We studied 50 consecutive male patients with sexual problems, attending the psychosexual clinic in Psychiatry Outpatient Department of University College of Medical Sciences & associated Guru Teg Bahadur Hospital, Delhi, from 15th April 2010 to 15th July 2010. For the purposes of classification, the following terms were used:

**Dhat syndrome:** primary complaints of loss of semen through nocturnal emissions, masturbation or sexual intercourse, possibly accompanied by various physical and mental symptoms; a complaint of passing whitish discharge before or during micturition was also included<sup>2</sup>

**Impotence:** a persistent inability to obtain an erection sufficient to allow orgasm and ejaculation to be satisfactorily concluded during heterosexual coitus<sup>18</sup>

**Premature ejaculation:** orgasm and ejaculation persistently occur before or immediately after penetration of female introitus during heterosexual coitus<sup>19</sup>.

The patient with a presenting complaint of passage of Dhat in urine were thoroughly investigated (physical examination, routine blood, urine and stool examination, urine culture, semen analysis, blood sugar, venereal disease tests, chest X-ray, examination of abdomen and lumbosacral spine, etc.) whenever required. The specialist's opinion was sought when needed.

The psychological assessment included recording the detailed history (sexual and psychiatric) and mental state examination. Those with a past history of physical

illness, psychiatric disorder, or drug abuse were excluded from the study.

The Hamilton Rating Scale for Depression (HRSD)<sup>20</sup> was used to measure depression. It is a 21 items scale and a total score of more than seven was taken as indicating depression. Associated psychiatric disorders were diagnosed according to ICD-10<sup>21</sup>.

## RESULTS

The patients were aged 18-40 years with mean of 24.6±3.8 years. Age at onset of the psychosexual disorders was 14-28 years with mean of 21.8±4.7 years. There were 35 (70%) married and 15 (30%) unmarried. There were 30 (60%) matriculates, 12 (24%) studied upto class 12, and 4 (8%) graduates and illiterates each.

Of the 50 patients, 40 complained of Dhat as a major symptom. The type of sexual dysfunction and scores on the HRSD are shown in Table 1.

**Table 1: Type of sexual dysfunction and scores on the HRSD**

Sexual dysfunction	<7	>7	Total no of cases (%)
Impotence	2 (50.0)	2 (50.0)	4 (8.0)
Premature ejaculation	2 (33.3)	4 (66.7)	6 (12.0)
Dhat syndrome alone	7 (28.0)	18 (72.0)	25 (50.0)
Dhat syndrome with Impotence	2 (25.0)	6 (75.0)	8 (16.0)
Dhat syndrome & Premature ejaculation	2 (28.6)	5 (71.4)	7 (14.0)
Total	15 (30.0)	35 (70.0)	50 (100.0)

Although the HRSD was used to divide the sample with a cut-off score of 7, the 27 patients scoring over 7 actually had scores ranging from 10 to 16 (mean 14.4±3.1).

Thirty eight (76%) patients met ICD-10 criteria for a psychiatric diagnosis. Mixed anxiety depressive disorder was found to be the commonest (n=20, 40.0%), followed by generalized anxiety disorder (n=10, 20.0%), phobic disorder (n=5, 10.0%) and major depressive disorder (n=3, 6%).

The common symptoms seen in patients with Dhat syndrome were weakness (78.2%), fatigue (71.3%), palpitations (65.7%), sleeplessness (63.6%), loss of interest (60.4%), sad mood (57.3%), loss of headache (55.2%), headache (53.1%), worthlessness (52.4%), pain in epigastrium (48.7%), giddiness (43.3%), loss of appetiten (41.8%), forgetfulness (40.6%), frequency of micturition (35.4%), constipation (33.9%), guilt feelings (30.4%) and suicidal ideation (15.7%).

The co morbid medical disorders with patients attending psychosexual clinic were urinary tract infection (n=12, 24%), followed by sexually transmitted diseases (n=5, 10%) [3 cases with herpes, one patient with gonorrhoea and one patient with chancroid and herpes genitalis]. There were one case each with HIV and diabetes mellitus.

There was history of contact (premarital/extramartial) in 64% cases.

Of the 40 patients with Dhat syndrome, 18 (45 %) believed Dhat to be semen, 7 (17.5 %) to be pus, 5 (12.5%) to be sugar, 4 (10.0 %) to be concentrated urine, while 6 (15.0 %) were not sure of its composition. When asked about what the cause of Dhat syndrome was, 21 patients (52.5%) thought it to be masturbation or excessive sex, 8 (20%) venereal disease, 6 (15 %) urinary infection, 3 (7.5%) overeating, 2 (5%) constipation or worm infestation, 2 (5%) disturbed sleep, while one (2.5%) believed it to be genetically determined.

Among the attitudes towards Dhat syndrome, the most prevalent was the belief that it caused physical as well as mental weakness (45%) while 32.5% thought it caused physical illness only (Table 6). 60% believed that the Dhat syndrome required tonics for treatment while 52.5% demanded vitamin B-complex tablets or injections for treatment. Only 6% thought that it required no medication but the proper investigations (Table 2).

**Table 2: Attitudes of patients towards Dhat syndrome (n=40)**

Attitude	n (%)
Towards dysfunction: believing the syndrome can cause:	
Physical weakness	13 (32.5)
Mental weakness	8 (20.0)
Physical and mental weakness	18 (45.0)
Death at an early stage	4 (10.0)
Deformed fetus	2 (5.0)
Production of more female children	2 (5.0)
No illness	3 (7.5)
Towards treatment: believing the syndrome requires:	
Tonics	24 (60.0)
B-complex tablets	8 (20.0)
B-complex injections	13 (32.5)
Antibiotics	6 (15.0)
Anti anxiety drugs	3 (7.5)
Aphrodisiacs	14 (35.0)
Protein and iron-rich diet	12 (30.0)
No medication	3(6.0)

## DISCUSSION

The present study revealed that those with Dhat

syndrome were young adults and the onset of symptoms in most of the cases was in early adulthood. Singh<sup>15</sup> reported a mean age of onset of 21.8 years. In our study, 70% of patients were unmarried; Nakra et al<sup>22</sup> found half of their patients with Dhat syndrome to be unmarried. The preponderance of unmarried patients could be because they had first become worried about the success of their future sexual life and thus presented to the psychiatric clinic with sexual and other symptoms. As found by Singh<sup>15</sup> and Nakra et al<sup>22</sup>, most of the cases in the present study were literate.

A total of 40 cases (80%) came with the primary complaint of Dhat syndrome and of these, 37.5 % also complained of impotence or premature ejaculation. In Singh's series<sup>15</sup> of patients with psychosexual disorders, 62% came with the complaint of Dhat syndrome. This is in contrast to Western studies, which reported that more than 50% of all men treated for sexual disorders had impotence as the chief complaint and over 90% of them had psychological impotence<sup>23, 24</sup>. Premature ejaculation has been reported as the chief complaint in 40% of men treated for sexual disorders. This had been more common among college-educated than among less educated men, and was thought to be related to their concern for partner satisfaction<sup>24, 25</sup>.

Of our 50 patients, 35 (70%) had scored over 7 on the HRSD. This is comparable with the 50% depressed cases of Dhat syndrome in a study by Singh<sup>15</sup>. Though the HRSD has been used successfully to measure depression in Indian depressives<sup>15, 26</sup>, the validity of many rating scales, especially self-rating scales and interview schedules, has been questioned, and they need careful use in cross-cultural comparisons<sup>27-31</sup>.

Among psychiatric disorders, depression was found to be the commonest illness (40.0 % with mixed anxiety depressive disorder, 6.0 % with major depressive disorder) followed by generalized anxiety disorder (20.0 %). This finding is also similar to those in other Indian studies<sup>14, 22</sup>.

The so-called 'culture bound' syndromes involve symptoms and signs which are observed by psychiatrists in all countries: worry, irritability, insomnia, fear, emotional lability, appetite change, weakness, pain, social withdrawal, inability to meet social obligations, volubility, etc<sup>32</sup>. Among the presenting symptoms of Dhat syndrome weakness (78.2%), fatigue (71.3%), palpitations (65.7%), and sleeplessness (63.6%) were frequent. Singh (1985) similarly reported somatic symptoms (fatigue, weakness, etc) in 70.8%, headache in 68.0%, depressed mood in 62.5%, anxiety in 51.6%, and loss of appetite in 43.8% as the common presenting complaints of Dhat syndrome<sup>15</sup>.

The knowledge and attitudes of patients towards Dhat syndrome have not yet been studied. In this study out of the 40 patients with Dhat syndrome, 18 thought Dhat to be semen, while 7 thought it to be pus, 5 to be sugar, 4 to be concentrated urine, while 6 did not report any definite belief. Scientifically, Dhat has been reported

as the whitish discharge which passes along or before the passage of urine. This is usually related to the presence of oxalate or phosphate crystals which are present in a high concentration in the alkaline urine of the average Indian consuming a vegetarian diet<sup>15, 33</sup>. Turbidity in urine may also be due to prostatic fluid and urethral gland secretions trickling down the urethra while de-faecating; the habit of squatting while defaecating may contribute, because the white sticky substance can then easily be seen<sup>28</sup>.

## CONCLUSIONS

Dhat syndrome is commonly associated with mixed anxiety and depressive disorder and urinary tract infections (UTI) in terms of psychiatric and medical illness respectively. Dhat syndrome commonly presents with weakness, fatigue, palpitations and sleeplessness.

## FURTHER SUGGESTIONS

This study supports the diagnostic status of Dhat syndrome in Indian culture. Its prevalence and phenomenology should be explored not only in other cultures but also among Indian emigrants. However, the presence of psychiatric comorbidity, especially depression and sexual disorders in a majority of these cases calls for careful evaluation and appropriate treatment.

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