(Weston & Whitlock, 1971), with or without cognitive impairment. Erotomania is also described in a pure form, as well as occurring in paranoid schizophrenia.

Management of this patient has proved extremely difficult. Through the years she has been treated with varying types and doses of antipsychotic medication, all of which have had very limited success. She usually improves to some degree while in hospital, but when discharged defaults on her treatment, and rapidly relapses, leading to frequent readmissions. She has had both oral and depot medication. At the time of writing, she was a patient on a rehabilitation ward in hospital, and was being treated with trifluoperazine (15 mg t.d.s). The response was not spectacular, and she remained absolutely convinced of the apparent truth of her delusional beliefs, despite medication, which has been true of so many of her symptoms during her long illness.

Acknowledgements

I wish to express my gratitude to Dr M. S. Bethell, Consultant Psychiatrist, Parkside Hospital, Macclesfield, for his invaluable guidance in the preparation of this report.

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British Journal of Psychiatry (1990), **156**, 577–579

Dhat Syndrome
A Sex Neurosis of the Indian Subcontinent

R. K. CHADDA and N. AHUJA

Dhat syndrome is a culture-bound sex neurosis of the Indian subcontinent. Fifty-two patients with a presenting complaint of passage of 'Dhat' in urine were studied. Diagnosis of neurotic depression, anxiety neurosis, hypochondriacal neurosis, and psychogenic impotence were made in 21, 19, 3, and 1 cases respectively. Seven patients received the diagnosis of pure Dhat syndrome, and one of gonorrhoea.

Dhat syndrome is a culture-bound neurosis quite common in the Indian subcontinent (Wig, 1984; Tiwari *et al*, 1986). Passage of a whitish discharge with urine is described as 'Dhat', believed to be semen by the patient, although there is no objective evidence of such discharge.

The word 'Dhat' has been derived from the Sanskrit word '*Dhatu*', meaning the elixir that constitutes the body. Seven types of '*Dhatus*' are described in *Sushruta Samhita*, an ancient treatise on Indian medicine. Semen is considered as the most important of these. Semen is known by the name '*Virya*' in India, derived from a Sanskrit word meaning bravery, power, or strength, or that which generates power and greatness. *Charak Samhita*, another ancient treatise on Indian medicine, describes a disorder resembling Dhat syndrome by the name of '*Shukrameha*' (spermaturia), in which the patient passes semen resembling urine or urine mixed with semen. In *Ayurveda*, the Indian system of medicine,

https://doi.org/10.1192/bjp.156.4.577 Published online by Cambridge University Press

loss of semen in any form is considered to lead to depletion of physical and mental energy. This belief is deeply ingrained in the Indian culture and is responsible for the symptoms of Dhat syndrome.

A typical case presents with multiple somatic complaints along with feelings of physical and mental exhaustion, attributed to the passage of semen in urine (Neki, 1973; Wig, 1984; Singh, 1985; Tiwari *et al*, 1986). Apart from a whitish discharge with urine there are no other urinary symptoms. Urine examination fails to reveal any discoloration, sperm, or any other abnormal constituents except for occasional oxaluria or phosphaturia.

Method

All patients seen in the psychiatry out-patient clinic with a presenting complaint of passage of 'Dhat' in urine over six months (January–June 1988) were included in the study. In addition to a detailed psychiatric assessment, patients were also asked what they thought caused the symptoms and how it had affected them. Urine examination was done in all cases for albumin, sugar, phosphates, and cytology.

Results

Fifty-two patients were included in the study. Most of them were in late adolescence or young adulthood. About half were married. Thirty-two patients belonged to families of manual workers. Others included farmers, shop owners, and clerical employees. Twenty patients were illiterate or educated to primary level. The rest had completed their schooling successfully, and five were graduates.

Twenty-eight patients were symptomatic for more than a year and four were ill for less than a month. Frequency of passage of Dhat varied from once or twice per day to once per 10–15 days, although in most patients it was once in 1–7 days.

More than 80% of patients complained of hypochondriacal symptoms (bodily weakness, multiple aches and pains, and vague somatic sensations). Depression was seen in half of the patients and 37 showed anxiety. Twenty-two complained of premature ejaculation and 19 of erectile impotence as a consequence of the passage of Dhat. Overconcern with nocturnal emissions was seen in ten cases. Urinary complaints in form of burning micturition and increased frequency were seen in five cases.

All the patients attributed their symptoms to the passage of Dhat and believed it to be semen. Twenty-four patients thought their earlier masturbatory habits to be responsible for the illness. Pre-marital and extramarital relations and earlier homosexual contacts were also believed to be the cause in 11 and 3 patients respectively.

Unexpectedly, none of the patients admitted any marital disharmony secondary to the illness, or sexual problems.

Urine examination was normal in most of the patients. Oxaluria and phosphaturia were seen in five and three patients respectively. Pus cells were seen in the urine of one patient who later received a diagnosis of gonorrhoea.

A diagnosis of neurotic depression was made in 21 patients. Another 19 were diagnosed with anxiety neurosis. Hypochondriacal neurosis and psychogenic impotence were the diagnoses in three and one case respectively. Only seven patients received a diagnosis of pure Dhat syndrome.

Discussion

Only 7 of our 52 patients received a diagnosis of pure Dhat syndrome. The rest could be given a diagnostic label of different neurotic illnesses except one, who on investigation was found to be suffering from gonorrhoea. The patients who received the diagnosis of pure Dhat syndrome did not differ from the rest in any significant way except for absence of anxiety, depression, or hypochondriacal symptoms. Whether these seven cases require a taxonomic niche of their own is a point which needs further investigation. It may be emphasised that in all the cases, symptoms were based on the cultural belief that loss of semen in urine was responsible for the problem.

In some of the earlier Indian studies (Nakra, 1971; Nakra *et al*, 1977; Singh, 1985), a large proportion of patients presenting with sexual dysfunction was found to be suffering from Dhat syndrome. In Nakra *et al*'s sample, semen loss was considered to be definitely harmful by two-thirds of sexual dysfunction patients and by 90% of patients with Dhat syndrome. Hypochondriacal symptoms, depression, and anxiety have been reported in varying proportions of Dhat syndrome patients in the literature (Sukhtankar, 1960; Joshi, 1965; Nakra, 1971; Nakra *et al*, 1977; Behere & Natraj, 1984; Singh, 1985).

There is an interesting Indian study (Malhotra & Wig, 1975) on attitudes in the general population towards loss of semen. A large proportion of the study sample believed it to be harmful, and this was more prevalent in lower socioeconomic groups. Malhotra & Wig (1975) comment that attitudes towards loss of semen constitute an organised belief system. The susceptible individual reacts to this system and presents with a variety of neurotic symptoms, which usually disappear if misconceptions about semen loss are effectively dealt with.

In some of the other reports from India (Carstairs, 1961; Singh, 1985) semen loss has been perceived as definitely harmful by large segments of normal populations studied. The belief was found to be more common in rural and less 'sophisticated' people.

There is a widespread cultural belief in India and neighbouring countries like Pakistan, Nepal, and Bangladesh, that semen is a very precious body fluid and its loss leads to serious physical and mental illnesses (Wig, 1984). *Charak Samhita* and *Sushruta Samhita* have described semen as an extremely

https://doi.org/10.1192/bjp.156.4.577 Published online by Cambridge University Press

precious material formed by distillation of blood. According to them, 40 meals give rise to one drop of blood and 40 drops of blood give rise to one drop of bone marrow. 40 drops of bone marrow give rise to 1 drop of semen, the elixir of life, one ejaculation of which will lead to loss of energy (Malhotra & Wig, 1975). Individuals, who are prone to neurotic problems may respond to such beliefs and present with Dhat syndrome as well as anxiety or depression.

In our experience such patients do not regularly attend for follow-up. A similar finding was reported by Singh (1955). A probable reason for this may be that these patients are not satisfied with our explanation that they are not suffering from any loss of semen and that semen loss is in any case not detrimental. Another possible reason may be that patients recover quickly. However, this point needs further investigation. In a study by Behere & Natraj (1984), 66% of the patients had completely recovered at one-year follow-up and another 22% had improved. Treatment modalities used were sexual counselling and treatment of associated anxiety, depression, or hypochondriasis. There are also reports of successful use of certain herbal medicine named in *Ashwagandha*, *Kapikachchu*, *Vriddhadaraka* and *Amrutprabha* in Dhat syndrome (Sukhtankar, 1960; Joshi, 1965). However, the results are controversial as sexual counselling and supportive psychotherapy were performed.

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British Journal of Psychiatry (1990), **156**, 579–581

Use of Carbamazepine in Psychosis after Neuroleptic Malignant Syndrome

MALCOLM PEET and JOHN COLLIER

A case is described of NMS during treatment with sulpiride. The subsequent psychosis resolved during treatment with carbamazepine. It is proposed that this patient may have suffered from a supersensitivity psychosis, and that resolution of her post-NMS psychosis could have been spontaneous.

Patients who remain psychotic after recovery from neuroleptic malignant syndrome (NMS) pose a therapeutic dilemma. Rechallenge with neuroleptic drugs carries a significant risk of recurrence

https://doi.org/10.1192/bjp.156.4.577 Published online by Cambridge University Press