

## RELATIONSHIP OF FETISHISM AND TRANSVESTISM TO BRAIN AND PARTICULARLY TO TEMPORAL LOBE DYSFUNCTION

ARTHUR W. EPSTEIN, M.D.<sup>1</sup>

Both fetishism and transvestism are characterized by the dominance of symbol or sign in sexual activity. In fetishism, arousal and orgasm are attained in a forced and stereotyped fashion by means of an object; other characteristic behavioral abnormalities are almost invariably present (4). Transvestism (cross-dressing) may assume varied forms (7) but is closely related to fetishism, particularly when articles of clothing evoke the imperative need that they be donned. This form of transvestism may properly be called fetishism-transvestism. In transvestism, the act of cross-dressing is not commonly followed by orgasm but rather by a sense of profound gratification.

It has recently been suggested that a disorder in brain mechanisms, primarily related to the temporal lobe, plays an etiologic role in the genesis of fetishism (4). Indeed, Mitchell *et al.* (8) described a patient with fetishism and temporal lobe seizures, both relieved by temporal lobectomy. Krafft-Ebing's case recordings (6) also indicate the occurrence of epilepsy in some fetishists.

Davies and Morgenstern (3) described a patient with transvestism which did not appear until middle life, and then only after the development of seizures of both grand mal and temporal lobe type. These authors listed three additional cases of transvestism with evidence of temporal lobe dysfunction, including one with a small astrocytoma in the right uncus region.

Petritz and Foster (10) reported a case of transvestism in a 14-year-old boy with epilepsy and juvenile diabetes. Yawger (11) described a patient with apparent grand mal epilepsy in whom, along with various other behavioral abnormalities,

"there has been the wish for women's clothes." In neither of these two cases was there evidence of focal involvement of the temporal area.

A related phenomenon has been described by Clark in his case studies on the psychosexuality of epileptics, published in 1915 (2). One of his patients (Case 3) developed epilepsy at the age of 19. The seizures were both grand mal and psychomotor in type; the epileptogenic focus was undoubtedly temporal in location, since the seizures began with characteristic stereotyped phenomena, including complex auditory and visual hallucinations. This patient "during the first three year period of his disease . . . gradually assumed many female characteristics, used powders and scents, decorated his room with photographs and pretty colored cloths . . ." This is an example of effemination in behavior occurring in an individual with temporal lobe dysfunction.

This paper presents five new patients. The first is a case of fetishism; the second and third, of fetishism-transvestism; the fourth, of transvestism; the fifth, of transitory fetishistic-transvestitic behavior. The findings in these patients support the hypothesis relating fetishism and transvestism to brain—particularly temporal lobe—dysfunction. In these brief case presentations, clinical and electroencephalographic data are emphasized; no attempt is made, because of the nature of the study, to state the pertinent psychodynamics.

### CASE MATERIAL

#### *Case 1: Fetishism*

The patient was a 31-year-old unmarried college graduate with boot and raincoat fetishism. These fetish objects had marked condensation of meaning. The boot (a

<sup>1</sup> Department of Psychiatry and Neurology, Tulane University School of Medicine, New Orleans, Louisiana.

man's) symbolized the penis primarily, but it, as well as the raincoat, also represented the mother's body.

The patient displayed many of the characteristics described in fetishists (4): a reserved manner with character traits of the obsessive-compulsive variety; preoccupation with the fetish objects and their frequent involuntary appearance in awareness; the appearance of the boots and raincoat in dreams, usually accompanied by seminal emission; the domination of psychic life not only by the fetish but also by related objects or thoughts which assumed magical power; the sudden and involuntary appearance of thought fragments in consciousness, often associated with marked tension and discomfort; regular self-stimulation, particularly frequent during adolescence and early adulthood; attainment of orgasm by means of the fetish and related fantasies.

The patient had had an intense and ambivalent relationship with his mother from infancy. He was not erotically aroused by women and had never had coitus. Erotic arousal and sexual fantasies consisted of

homosexual (in which he assumed the feminine role) and fetish motifs.

There was no history of epilepsy. During infancy and early childhood there was an unusual degree of motor hyperactivity. As far as can be determined, his preoccupation with the raincoat began at six years. The very powerful erotic feelings for men's boots developed at ten years. For a brief period at the age of nine or ten years he played with dolls, and occasionally put a girl's dress over his clothes.

An electroencephalogram showed spike forms over the right temporal electrode. Intravenous administration of 300 mg. of Metrazol produced bitemporal spiking, maximal on the right (Figure 1).

#### *Case 2: Fetishism-Transvestism*

The patient, a 53-year-old unmarried man confined to a state mental hospital, had almost always worn women's underpants under his clothes.

He recalled "wanting to be a girl" from the age of four or five. Somewhat later in childhood he developed a specific interest in "panties," but not until adult life did he begin to wear them constantly. He practiced self-stimulation, using the panties as a stimulus. He had accumulated approximately 200 pairs of panties, and kept a record of all he bought. He occasionally shaved the skin of his abdomen to appear more feminine. Since his institutionalization at the age of 46 the need to wear the underpants has diminished, although he recalls during this period at least one dream in which the panties appeared.

The patient had had grand mal epilepsy since the age of 15. Interestingly, no convulsions have occurred in the last seven years, during which time his need to wear the underpants has also diminished.

The patient was apparently able to make an adequate environmental adjustment until about the age of 44, when he developed uncontrollable crying episodes. Auditory hal-

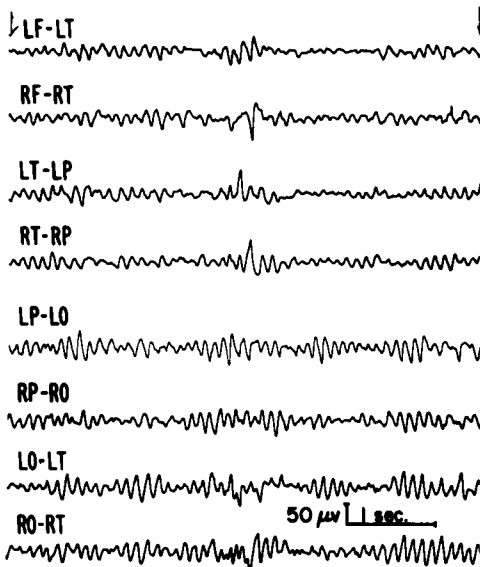


FIG. 1. Fragment of EEG record obtained from Case 1 after administration of Metrazol, 300 mg.

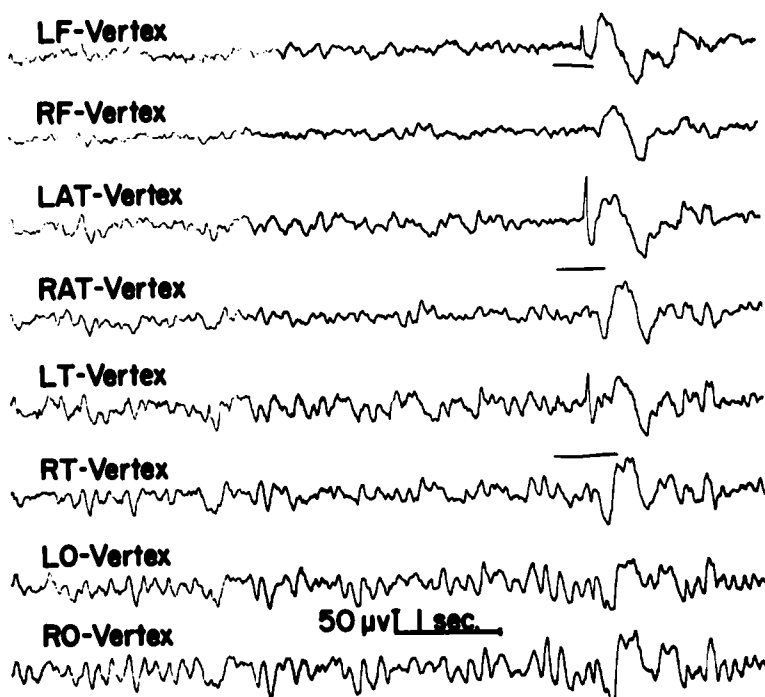


FIG. 2. Fragment of EEG record obtained from Case 2 after administration of Chloralose, 500 mg.

lucinations, delusions of persecution and grandiose ideas (he regards himself at times as the son of God) then appeared.

A routine electroencephalogram showed no definite abnormality. Activation with 500 mg. Chloralose<sup>2</sup> produced occasional bursts of generalized paroxysmal slow activity, but also a well defined left anterior temporal-left temporal spike focus with occasional but not consistent spread to the left frontal (Figure 2).

### Case 3: Fetishism-Transvestism

The patient, a nine-year-old boy with an effeminate manner, since the age of four or five had had an almost uncontrollable urge to put on various articles of feminine attire.

<sup>2</sup> Ideally, electroencephalographic studies should include attempts at activation when routine recordings are normal. Drugs used in this study were Metrazol and Chloralose. Chloralose has proved to be a potent activator not only in epileptics but also in patients with behavioral disorders of impulsive type (9).

He was first attracted to a skirt, which he would put on and then dance about, enjoying the sight of its "flaring out." Recently his interest has included women's shoes, which are "put on the moment he sees them," and also head scarves. The patient's mother was struck by the compelling quality of his urge: "He becomes very excited; there is no ending point—he wants to go more and more—to find something more to put on—it pushes him to keep on going." The patient may keep up the dressing activity for hours, and will display no embarrassment if seen by others. He has also enjoyed playing with dolls.

Birth history was normal. There was a disturbance in sleep pattern in early infancy, and he cried "almost constantly" for the first six months of life. He displayed marked motor hyperactivity in infancy, and moderate hyperactivity was still present.

There was no history of epilepsy, but the patient had had two episodes of syncope.

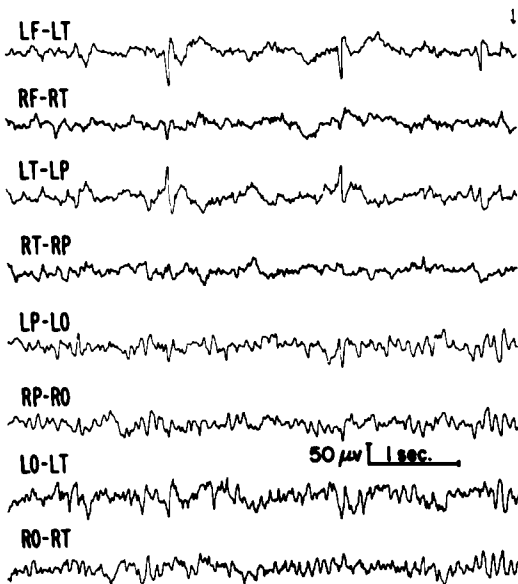


FIG. 3. EEG record of Case 3, showing left temporal spike focus.

Enuresis was present until the age of six years. Although outwardly alert and intelligent, he had had a learning difficulty, particularly in reading and arithmetic.

A routine electroencephalogram showed a well defined left temporal spike focus, with a frequent accompanying slow wave (Figure 3).

#### Case 4: Transvestism

The patient, a 51-year-old married man, a college graduate of high intellectual attainment, had had a compelling urge throughout his life to wear feminine attire. The patient's earliest memory of this urge was that, when he was three or four, his grandmother had placed a veil over his face and this act had filled him with pleasure. At the age of five he had had a desire to wear a raincape, and then dresses. At that age he had spent an entire afternoon putting on and taking off dresses. At the age of 28 he had begun to buy women's clothes. The need to cross-dress became increasingly intense, and had been very marked since the age of 38, so that now he does so "at every free moment."

The patient said he experienced a sense of great calm and contentment as soon as he put on women's clothes, but no desire for self-stimulation. He also noted an enhancement in his ability to perform motor acts (e.g., typing) when cross-dressed. His interest was not in any specific article of attire but in the "total ensemble." He would become aroused by seeing a "beautifully dressed" woman. Not effeminate in manner, he nevertheless felt that he was not a man, and verbalized his wish to become a woman in the physical sense.

The patient had had occasional nocturnal emissions in adolescence, but had never experienced a seminal ejaculation while awake until the age of 30. Masturbation was very infrequent. Heterosexual intercourse had been almost non-existent, and there were no homosexual interests. The patient had had occasional dreams, not accompanied by seminal emissions, in which he would see well dressed women, or himself dressed in women's clothes.

There was no history of epilepsy or of childhood hyperactivity. There were very rare episodes of enuresis in early life. The patient's mother had had somnambulism.

An electroencephalogram done when the patient was 45 years of age was normal. A routine electroencephalogram done at age 51 showed low amplitude sharp waves over the left temporal electrode (Figure 4), occasionally assuming a spike configuration. Activation procedures have not been attempted in this patient.

#### Case 5: Transitory Fetishism-Transvestism

The patient, a boy of 12, had encephalitis following rubella at the age of five, after which he developed frequent grand mal as well as apparent petit mal and minor motor seizures, intellectual defect and behavioral symptoms (lability and unpredictability of mood, distractibility, lack of social judgment and inhibition, and occasional hyperactivity).

There was no unusual sexual behavior

until the age of 12 when, for a period of about one week, the patient displayed an "intense interest" in his sister's slips. He would put on a slip in a repetitive fashion

and could not be dissuaded from this activity. The patient was also seen on several occasions to undress and look at himself in a mirror.

A routine electroencephalogram done when the patient was ten years of age was abnormal: the record showed almost continuous high voltage mixed delta and theta waves, as well as spike-wave complexes, in a generalized distribution (Figure 5). There was no evidence of localization to the temporal area.

With the exception of the mental status, neurologic examinations have been normal. The clinical diagnosis is that of diffuse brain damage, post-encephalitic.

#### DISCUSSION

Of the four patients with true fetishism or transvestism (Cases 1-4), three had definite electroencephalographic abnormalities; in the fourth (Case 4), there was a suggestive abnormality. In three of the patients these abnormalities were localized to the

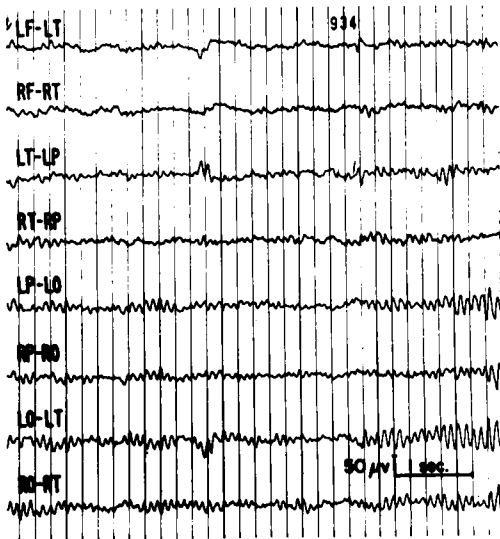


FIG. 4. Fragment of routine EEG, Case 4 (see text).

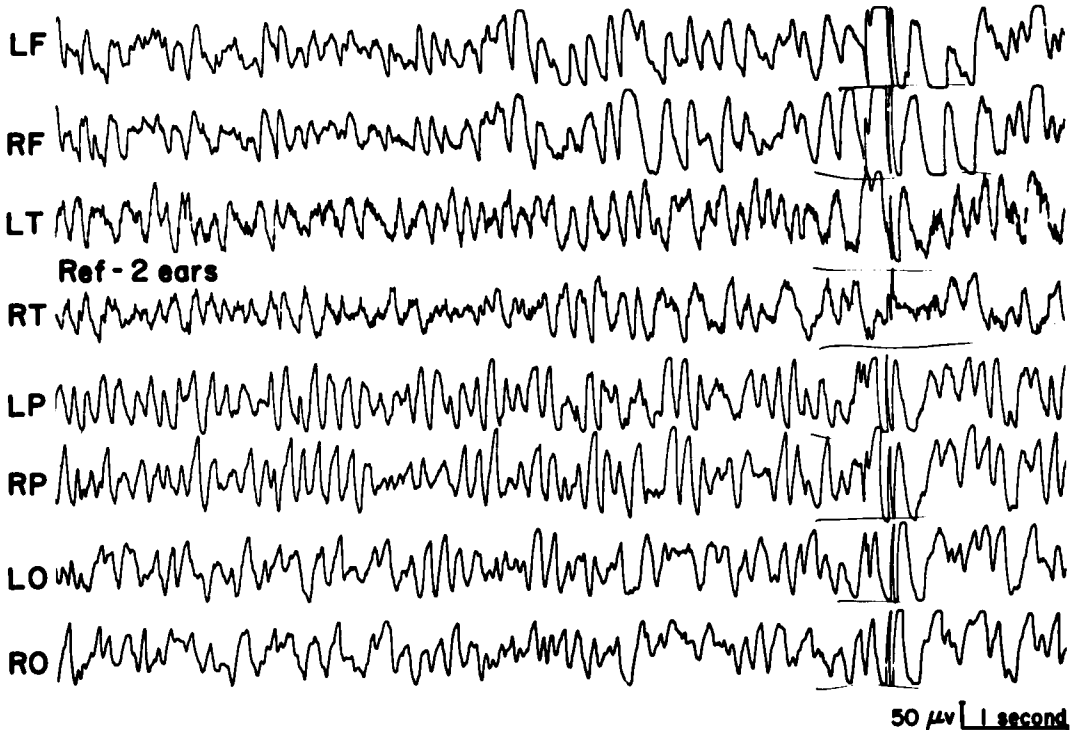


FIG. 5. EEG record of Case 5.

temporal area; the fourth (Case 2) showed a focal temporal disturbance in the presence of a generalized electroencephalographic abnormality. Only one patient (Case 2) had overt seizures. Certain clinical features were present in the others which may be viewed as possibly associated with brain dysfunction: hyperactivity (Case 1); disturbed sleep pattern in infancy, hyperactivity, enuresis, learning difficulty (Case 3); maternal somnambulism (Case 4).

In Case 5 (included in this series because of theoretical interest), transitory cross-dressing behavior occurred in an individual with evident brain dysfunction, manifested by seizures, varied behavioral symptoms and intellectual defect. The dysfunction was diffuse, with no apparent temporal localization.

It is hardly to be expected that electroencephalographic study of patients with fetishism or transvestism will uniformly reveal an abnormality, but the high frequency of such abnormalities in this series is noteworthy. Further, although the neurologic data so far accumulated in the literature and in this series do not always indicate a temporal lobe origin either of electroencephalographic abnormalities or of seizures, should these be present, nevertheless the high frequency of implication of this area is striking.

The clinical manifestations of dysfunction in the temporal (more properly limbic) system are not well understood and cannot be fully catalogued—beyond commonly recognized seizure patterns. Methods of detecting such dysfunction are also limited, once one has exhausted the aid offered by the electroencephalogram. Because of the imperfectly developed state of clinical knowledge, it is not possible at this time to know whether certain disturbances in sexual behavior are in themselves, at least in part, manifestations of dysfunction in temporal and/or limbic mechanisms. There is clinical evidence, however, that the temporal lobe

plays a role in the regulation of endocrine mechanisms related to sexual behavior (1). Further, an association between temporal lobe dysfunction and altered sexual behavior on the symbolic level is suggested in the work of the authors already cited.

Fetishism and transvestism are strongly related but, in their "pure" forms, have distinguishing characteristics. In the former, for example, there are ease and readiness of ejaculation upon presentation of the fetish object, whereas in "pure" transvestism, ease of orgasm and urge for self-stimulation are not usual. In transvestism, the symbolic object is women's clothing, which is then worn; in fetishism, the object may be of no obvious erotic significance and thus by its very ambiguity have the capacity for condensation. Both disorders, of course, have basic behavioral characteristics in common: the symbol or sign aspects of sex are dominant; the activity revolving about the symbol or sign often yields intense pleasure and is "imperative" and repetitive in nature; there is strong identification with the original sexual object (mother) and a need to become as one with this object.

In fetishism and transvestism, one is apparently dealing with neuropsychologic mechanisms of imitation, identification (5) and sexual arousal. These mechanisms depend for their original formation on sensory stimuli, which may later acquire sign or symbol significance. It would appear that the male (and fetishism and transvestism are primarily disorders of the male) normally tends to utilize, and may often be dependent upon, specific external stimuli for purposes of sexual arousal. It is possible that the temporal (perhaps more properly limbic) system may subserve psychic mechanisms concerned with sexual arousal and related processes of imitation and identification. Dysfunction in this neural system—whether as a result of focal disturbance or as a participant in a generalized disturbance—may prevent the proper subordina-

tion and integration of such psychic mechanisms. Sign and symbol become dominant in sexual activity and serve their primary role not only as stimulus but also as object of consummation.

It should be noted that, at least in fetishism, the disturbance is not limited to sexual activity but is more widespread, involving varied behavioral areas. It has been postulated that the basic defect in fetishism is one of "increased organismic excitability"—itself dependent upon dysfunction of the brain, particularly temporal lobe mechanisms (4). The relationship between such a postulated brain disturbance and the psychodynamic patterns of the fetishist has been previously discussed (4).

#### SUMMARY

Evidence has accumulated in the literature suggesting a relationship between fetishism and transvestism, and brain (particularly temporal lobe) dysfunction.

Four new cases of fetishism and transvestism are presented. Three had electroencephalographic abnormalities with focal temporal abnormality; one, a suggestive temporal abnormality. A fifth case is presented where transitory cross-dressing occurred in an individual with generalized brain dysfunction.

The findings support the hypothesis of a relationship between these disorders and brain dysfunction. It is suggested that such dysfunction involves temporal lobe mecha-

nisms which may, particularly in the male, normally subserve sexual arousal patterns.

#### REFERENCES

1. ANASTASOPOULOS, G., DIAKOYIANNIS, A. AND ROUTSONIS, K. Three cases of temporal lobe epilepsy with endocrinopathy. *J. Neuropsychiat.*, **1**: 65-76, 1959.
2. CLARK, L. P. The nature and pathogenesis of epilepsy. *New York J. Med.*, **101**: 385-392, 442-448, 515-522, 567-573, 623-628, 1915.
3. DAVIES, B. M. AND MORGENSTERN, F. S. A case of cysticercosis, temporal lobe epilepsy, and transvestism. *J. Neurol. Neurosurg. Psychiat.*, **23**: 247-249, 1960.
4. EPSTEIN, A. W. Fetishism: A study of its psychopathology with particular reference to a proposed disorder in brain mechanisms as an etiological factor. *J. Nerv. Ment. Dis.*, **130**: 107-119, 1960.
5. HUTCHINSON, G. E. A speculative consideration of certain possible forms of sexual selection in man. *Amer. Naturalist*, **93**: 81-91, 1959.
6. VON KRAFFT-EBING, R. *Psychopathia Sexualis*. Physicians & Surgeons Book Co., New York, 1931.
7. LUKIANOWICZ, N. Survey of various aspects of transvestism in the light of our present knowledge. *J. Nerv. Ment. Dis.*, **128**: 36-64, 1959.
8. MITCHELL, W., FALCONER, M. A. AND HILL, D. Epilepsy with fetishism relieved by temporal lobectomy. *Lancet*, **2**: 626-630, 1954.
9. MONROE, R. R., JACOBSON, G. AND ERVIN, F. Activation of psychosis by a combination of scopolamine and alpha-chloralose. *A.M.A. Arch. Neurol. Psychiat.*, **76**: 536-548, 1956.
10. PETRITZER, B. K. AND FOSTER, J. A case study of a male transvestite with epilepsy and juvenile diabetes. *J. Nerv. Ment. Dis.*, **121**: 557-563, 1955.
11. YAWGER, N. S. Transvestism and other cross-sex manifestations. *J. Nerv. Ment. Dis.*, **92**: 41-48, 1940.