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Multiaxial Classification of Male Sexual Dysfunction

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Summary: Sexual dysfunction in male subjects is a multifaceted illness, not appropriately classifiable by any of the current diagnostic systems, in most of which a major disadvantage is their poor inter-rater reliability. This results in over- or underestimation of minor biological (e.g. hormonal) disturbances, which occur in conjunction with the disorder, but are unlikely to be only its pathophysiological correlate. These biological factors can be important in some cases, however, as they indicate therapeutic strategies (e.g. correction of a minor hormonal deficit). The broad acceptance of classificatory systems with multi-axial dimensions has prompted the construction of a new system. In accordance with DSM III this consists of seven equivalent axes and sub-axes, supplemented by five sub-types, from which the diagnostic attribution can be derived.

Presently available classificatory systems of sexual dysfunction are unsatisfactory for both clinical purposes and research. In particular, previously constructed diagnostic entities are not reliably applicable for clinicians with different theoretical and practical orientations and this implies that they do not provide an indication of specific therapies. An increasing amount of information has been accumulated, demonstrating the existence of subtle biological indices which can be related to sexual dysfunctions (Benkert & Holsboer, 1984), but more recent data cannot be adequately included into one of the currently available classification systems. These schemes will be discussed here in relation to the standards required for psychiatric diagnosis, and the question will be explored whether the proposed multi-axial classification system is a worthwhile extension of existing diagnostic instruments for sexual dysfunction. Emphasis will be placed on the recognition of biological measures, e.g. nocturnal penile tumescence or endocrine aberrations, during the diagnostic process. This kind of biological data is more feasible in men then in women, so that it was decided to restrict the following outline to male sexual dysfunction. However, construction of a classificatory system for female sexual dysfunction should follow the same lead, as soon as reliable biological data are at hand.

Present status of classification of sexual dysfunction

Construction of diagnoses must allow for a reliable evaluation, which is unbiased by the user's orientation and valid across different centres. Robins & Guze (1970) proposed that the disorder should be described on clinical grounds, and then systematically defined in relation to other disorders; laboratory investigations, as well as genetic and follow-up studies have subsequently to be undertaken. These recommendations were taken into consideration in research on schizophrenic and affective disorders, but for sexual dysfunctions, valid instruments of comparable complexity, built on empirical features, are not satisfactory either for clinical or research purposes.

The commonly used diagnostic systems for sexual dysfunction will now be discussed in the light of the following optimal criteria, recommended by several authors (Robins & Guze, 1970; Spitzer *et al*, 1975; Strauss, 1975; Spitzer, 1978): (a) homogenity of entities with respect to relevant biological and psychological factors; (b) relevance of the criteria defining individual categories for aetiology and therapy; (c) not overly restrictive delineation of individual classes, which is important to allow the recruitment of sufficiently large sample sizes for group comparisons; (d) independence of the criteria defining the categories from the user's attitudes and theoretical concepts.

Currently available classification systems were constructed on the basis of either aetiological or symptomatic features; Kaplan (1974) and Cooper *et al* 1970; Cooper, 1972) for example, distinguished between psychogenic and organic impotence. However, this distinction bears several caveats: attribution to organic impotence needs the positive identification of one or more somatic factors, so that the diagnosis of psychogenic impotence is generally based on an exclusion principle. Moreover, this distinction fails to consider somatic factors which may induce sexual dysfunction or prevent resolution of its symptomatology without being its prime cause.

As an example, reduced testosterone concentration in plasma is frequently a concomitant factor in male patients with sexual dysfunction; Cooper (1972) recognised this and proposed that the testosterone plasma level be included into a nosological classification. Future research is likely to disclose an array of other biological indices of comparable quality. Marshall *et al* (1981) have extended the organic/psychogenic dichotomy and added two further categories: firstly impotence due to organic and psychological factors and, secondly, impotence which cannot be explained by aetiological factors. Accordingly, the diagnosis of psychogenic impotence should only be made in cases where no organic causes are known and where those psychogenic factors are identifiable which may adequately explain precipitation and course of sexual dysfunction.

One shortcoming of this system becomes obvious if several factors need to be considered simultaneously. This is illustrated in cases where sexual dysfunction develops in the presence of a partner conflict and where an endocrine investigation reveals a testosterone plasma concentration at the lower end of the normal range. This subnormal testosterone level does not necessarily produce sexual dysfunction, but might have triggered the onset of symptomatology under this particular condition. According to the concept of Marshall *et al* (1981), this biological index would be disregarded and the diagnostic attribution would be to the psychogenic category, so that therapy which corrected the hormonal deficit would most likely be withheld. However, heterogeneity within the two groups in respect of important therapeutic items is an inherent disadvantage of this bimodal conception, while this kind of a aetiological orientation bears the risk of poor inter-rater reliability, depending greatly on the user's theoretical and therapeutic preoccupations. For instance, an organically orientated investigator may apply a more rigorous battery of laboratory tests to reveal the biological origin of sexual dysfunction than a psychoanalyst.

In addition to aetiologically orientated systems, more recent developments have focussed on symptoms and precipitating factors (Fordney-Settlage, 1975; Schmitt & Arentewicz, 1977). In addition to symptomatology, psychological and social conditions for which sexual dysfunction might be a sequel should also be indicated within these systems, but a preliminary aetiological attribution of so called 'non-psychological' (e.g. organic) causes sexual dysfunction would be needed. Both these investigative groups consider their concept to be mainly therapeutically orientated, but unfortunately, they have failed to attempt the incorporation of somatic correlates into their systems. Neglect of these biological indices and the necessity of aetiological presumptions make the broad acceptance of this system unlikely, at least for a comprehensive therapeutic approach.

In clinical practice, European psychiatrists refer to the International Classification of Disease (ICD-9, 1980), where a psychogenic aetiology is needed for the diagnosis of sexual dysfunction. Such a positive identification of psychogenic factors has drawbacks, one of which is poor reliability, another is underestimation of biological concomitants.

The rapidly progressing acceptance of the DSM-III system (APA, 1980) warrants detailed discussion of its criteria for sexual dysfunction. This diagnostic system distinguishes between sexual dysfunction as related to desire, arousal, excitement, and orgasm; each of these stages of sexual behaviour represents a separate category. However, these categories represent only those dysfunctions which cannot be explained by an organic disorder or a disorder classified in DSM-III, axis I (psychiatric disorder, excluding personality disorder). Somatic factors (physical diseases, physical conditions, and associated physical findings) can be recorded on axis III and accompanying psychosocial stresses are listed on axis IV. To permit symptomatological differentation, psychological and somatic factors may be recorded simultaneously.

However, with respect to the previously mentioned optimal criteria, the DSM-III concept has several unfavourable features:

(1) Its framework does not allow all patients with sexual dysfunctions to be subordinate under a nosological super-category; yet this is essential for experimental and therapy-orientated research which investigates the somatic conditions of sexual dysfunction. Consequently, when sexual dysfunction is associated with an affective disorder, the diagnosis "psycho-sexual dysfunction" (DSM-III) is ruled out

(2) Sexual dysfunction may not be diagnosed in the presence of an organic disorder or of a disorder recorded on axis I (psychiatric disorder, excluding personality disorder) provided this represents a causative factor.

(3) The stage (desire, excitement, arousal, orgasm) at which sexual dysfunction occurs should be reported. In many cases, however, such a clear-cut attachment in time is not possible.

(4) In DSM-III, it is not required that the nosological categorisation is carried out according to those factors which are considered to be of

primary therapeutic relevance. This is relevant to somatic and psychological conditions and diseases which are correlated with sexual dysfunction.

These items suggest that the reliability of the DSM-III system in its present form is not satisfactory for diagnosing sexual dysfunction, while Graber & Kline-Graber (1981) have demonstrated that the specificity and physiological basis of DSM-III are inadequate. Schover *et al* (1982) have further elaborated the DSM-III concept and narrowed the definitions by recording only the symptoms of sexual dysfunction. This concept permits inclusion of the characteristics of the disorder without regard to relevance for aetiology or therapy of the present syndrome, so that homogeneous samples do not differ in important aetiological and therapeutic variables.

The general concept of Essen-Möller & Wohlfahrt (1947), which delineates different relevant variables of related illness and its nosological classification, seems advantageous. When applying this multiaxial system, current syndromes are characterised and supplemented by variables which are closely related to the syndrome, but the nature of these variables is a matter of current discussion. The present proposal takes appropriate account of recent developments in the collection of biological data and in the diagnostic practices of research investigators. As a guideline for description of the axis we used the strategy of Helmchen (1980).

Multi-axial description of sexual dysfunction

Axis A: Description of the syndrome: inaccordance with DSM-III, the stages (desire, excitement, arousal orgasm) in which the dysfunction occurs are recorded.

Axis B: Description of the course: the date on which the dysfunction first appeared is recorded with a description of its course, from first appearance of symptomatology until the date of the investigation. Any symptom-free intervals should be specified.

Axis C_1: Description of relevant organic diseases: specification of defined basic organic diseases which may be of relevance for the occurrence of sexual dysfunction and which occur in conjunction with this dysfunction.

Axis C_2: Description of relevant laboratory findings: Specification of unusual findings which may be of relevance for sexual dysfunction and occur in conjunction with it (insofar as they have not been adequately described on Axis C_1).

Axis D_1: Description of relevant psychiatric disorder: Specification of defined psychiatric disorders (including personality disorder, sexual deviations and affective disorders) occuring in conjunction with the sexual dysfunction, according to axis I and II of the DSM-III system.

Axis D_2: Description of relevant psychosocial stressors: Specification of psychosocial stress accompanying the occurrence of sexual dysfunction. These data should be operationalised by life event scales.

Axis E: Description of medication: Specification of intake of pharmacotherapeutic substances or other drugs (including alcohol) which may be of relevance for the occurrence of sexual dysfunction and are taken concurrently.

All axes and sub-axes are equivalent in this system, but their relevance for aetiological attribution and therapeutic consequences differs considerably. Whereas axis A and B are descriptive, the criteria given in axis C, D, and E are relevant for classification and therapy. The biological and psychological mechanisms which induce and/or maintain sexual dysfunction are too complex to be understood. After the onset of symtomatology, it remains unresolved to what extent psychological or biological factors play a pathogenetic role, so that a classificatory system which incorporates both types of factors seems desirable.

Classificatory system for sexual dysfunction

The aetiologic and therapeutic classificatory system divides sexual dysfunction into the following subtypes.

Sub-type I a: Organic disorder:* sexual dysfunction with the simultaneous presence of a defined organic disorder which may be of relevance for the occurrence of the sexual dysfunction.

Sub-type I b: Physical conditions:* sexual dysfunction in the absence of sub-type I a and in the presence of unusual laboratory test and physiological features (e.g. deviations of the testosterone plasma level from standard; abnormal nocturnal penile tumescence).

Sub-type IIa: Psychiatric disorder: sexual dysfunction in the presence of a defined (i.e. DSM-III) psychiatric disorder including personality disorders.

* The terms 'organic disorder' and 'physical condition' are used in accordance with DSM-III.

Sub-type IIb: Psychosocial conditions: sexual dysfunction in the presence of psychosocial stress situations (e.g. partner conflict). Sub-type IIa has to be excluded.

Sub-type III: Pharmacological conditions: sexual dysfunction in parallel with the intake of medica-

tions or drugs (including alcohol) insofar as these may be of relevance for the occurrence of the sexual dyfunction.

Sub-type IV: Cryptogenic disorder: sexual dysfunctions which cannot be classified in any of the above-mentioned five sub-types.

Patients with sexual dysfunctions may on occasion display subtype Ia or Ib together with sub-type IIa or IIb and sub-type III.

Discussion

The proposed classification system is aetiologically orientated, without presupposing a definitive order of causative factors which might be responsible for onset and course of sexual dysfunction. This is important, since different sub-types require different therapeutic strategies. Investigators applying the proposed scheme do not need to commit themselves to either psychological or biological factors as origins of sexual dysfunction.

Consequently, a higher inter-rater reliability than in other aetiologically orientated systems is most likely. Also, this system enables investigators to construct population samples which will be homogenous with respect to relevant therapeutic or aetiological parameters, which is important for basic research as well as for therapeutic studies. In particular, the expanding knowledge of laboratory markers in psychiatric patients warrants their adequate consideration within a classification system (Benkert & Holsboer, 1984). Further studies which validate the outlined concept thoroughly on the basis of biological parameters are needed. To date, an integrative description of endocrine (gonadal steroids, gonadotropins, sex hormone binding globuline etc) and neurophysiological (nocturnal penile tumescence, sleep-EEG) markers of sexual dysfunction seems to be a most promising approach (Roffwarg *et al*, 1982; Benkert *et al*, 1984).

It is hoped that results of longitudinal studies within the same patients will support the validity of the suggested classificatory system, which allows delineation of therapeutic strategies, but it is not an aid to monitoring or even evaluating somatic or other therapeutic regimens. For that purpose, a scale is needed which assesses reliably the intensity of the syndrome, with the related items located on Axis A and B. Due to the particular nature of the disease, the most objective way to monitor the efficacy of a treatment are self-rating scales. Benkert (1977) developed a self-assessment scale to judge the severity of sexual dysfunction. Both, the validity of self-assessment scales as monitoring tools in longitudinal observations of sexual dysfunction and their criteria for classification need to be strengthened.

These scales should be used independently of self-report measures which describe sexual functioning and attitude intra-individually (Conte, 1983). Any further advances in future diagnostic specification should guarantee that the increasingly acknowledged technical and psychological factors will be incorporated in an appropriate manner.

Appendix

Application of the submitted classificatory system is illustrated by two examples:

Case 1: male patient, 50 years, married for 20 years.
Axis A: difficulty in achieving and maintaining erections; normal desire, ejaculation and orgasm; diminished frequency of erections, no spontaneous erections during morning awakening.
Axis B: slowly increasing difficulties to achieve and maintain erections over three years.
Axis C_1: no organic disease.
Axis C_2: testosterone plasma concentrations at three consecutive collections of low-normal or below normal prolactin plasma concentration, normal gonadotropin response to luteinising hormone releasing hormone (LHRH), normal NPT.
Axis D_1: normal.
Axis D_2: patient established a sexual relationship during a business trip 3½ years ago; subsequently, he considered separation from his wife. After partner therapy, problems were considered to be partially resolved.
Axis E: normal: Two beers/day, no smoking.
Diagnosis: sexual dysfunction: Sub-type I b (physical condition) and Sub-type IIb (psychosocial condition).

Case 2: male patient, 39 years, married for five years.
Axis A: diminished sexual desire; difficulty in maintaining erection; normal ejaculation and orgasm; missing spontaneous erection during morning awakening.
Axis B: difficulty for six months persistent.
Axis C_1: gastric ulcer 15 years ago; no organic diseases at the present time.
Axis C_2: normal testosterone and prolactin plasma concentrations, normal gonadotropin-response to LHRH, normal NPT.
Axis D_1: normal.
Axis D_2: normal.
Axis E: five cigarettes daily; half a litre of wine daily.
Diagnosis: sexual dysfunction; sub-type IV (cryptogenic disorder).

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