Lifetime Diagnoses in Patients with Somatoform Disorders: Which came first?

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Abstract. Thirty inpatients with somatoform disorders were examined with the structured clinical interview SCID for psychiatric lifetime diagnosis. In the present diagnoses, we found a concordance of 63% for somatoform and affective disorders and the lifetime comorbidity of both disorders was 87%. Additionally, patients with somatoform disorders frequently had a history of other psychiatric disorders (for example, anxiety disorders, 40%). For 73% of patients with somatoform disorders and a history of affective disorders, the onset of the somatoform disorder was prior to the onset of another psychiatric disorder. The time interval between the onsets of somatoform disorders and affective disorders was greater than 1 year for most patients; for 46% of the patients with a history of both disorders, the time interval between the two disorders was more than 5 years. The course of illness for somatoform and affective disorders was quite different; while affective disorders tended to episodic periods with interim remissions, the somatoform disorders usually showed long, chronic courses (mean duration of the current somatoform disorder was 11.9 years). Finally, the Symptom Check List SCL-90R demonstrated good discrimination between patients with affective and anxiety disorders. However, the SCL-90R failed to discriminate patients with somatoform disorders from affective- and anxiety-disordered subjects. Therefore, the development of other psychometric scales is necessary for the evaluation of patients with somatoform disorders.

Key words: Somatoform disorders – Somatization disorder – DSM-III-R – Lifetime diagnoses – Affective disorders – Anxiety disorders – SCL-90R

Introduction

Somatization is defined as the experience and expression of physical symptoms based upon psychological distress

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(Lipowski 1986). Since 1980, the third edition of the diagnostic and statistical manual for mental disorders (DSM-III) (APA, 1980; revised form, APA, 1987) summarizes somatization symptoms in the section of somatoform disorders. The prototype of this class of disorders is the so-called somatization disorder with clearly defined diagnostic criteria such as an onset of the complaints before the age of 30 years and a minimum of 13 bodily symptoms (of 35) which have no demonstrable organic origin and which lead the patient to change his life, to seek medical help or to take medication. These strictly defined criteria lead to low prevalence rates for somatization disorders (0.06–0.6%; Escobar et al. 1989). Therefore, Escobar et al. (1989) proposed a class of abridged somatization disorders defined according to the somatic symptom index (SSI). The inclusion criterion for this class is a minimum of 5 symptoms (of the 35 symptoms described for somatization disorder). The prevalence rate for SSI is nearly 100 times higher than for somatization disorder.

The costs for the health care system caused by patients with somatization disorder seem to be quite high. Smith et al. (1986) found working disability in 83% of patients with somatization disorder. Health care costs for inpatient treatment were as much as six times as high as the average costs for people between 15 and 64 years; the costs for outpatient treatment were even 14 times higher than for comparable subjects. Women with somatization disorders were found to have three times as many operations as depressive women; 27% of the women who had undergone a hysterectomy for reasons other than cancer were given a diagnosis of somatization disorder (see Zoccolillo and Cloninger 1986). On the other hand, there have been few research reports of symptomatology, course and treatment.

A fact which complicates the treatment is the high comorbidity of somatoform disorders (SFD) with other psychiatric disorders. Lipowski (1990) has summarized the literature concerning the association between somatoform disorders and depression. Escobar et al. (1989) found that 20% of white American subjects with more than 6 somatic symptoms also had a diagnosis of dys-

thymia or major depression. For Mexican Americans in Los Angeles, this rate increased to nearly 50%, while the comorbidity with affective disorders was nearly 60% for Puerto Ricans. For 60 women with a complete somatization disorder, Morrison and Herbstein (1988) observed a comorbidity with major depression of 90%. These data are also supported by Smith et al. (1986), who found a history of depression in 85% of the patients with somatization disorders.

Different theories have been advanced for the high concordance between somatoform symptoms and affective disorders. It has been proposed that somatoform complaints are symptoms of an affective disorder ('somatized depression', 'masked depression'; Stoudemire et al. 1985). Behavioral medicine studies suggest that a reduction of activities which may result in affective disorders may be a consequence of somatoform disorder. Finally, somatoform disorders and depression may be the result of the same pathological mechanisms which predispose to both disorders (i.e. specific neuroendocrine process, body awareness, amplification of psychological and physiological sensations), and both disorders may appear at the same or at different times.

Despite the concordance of somatoform disorders and affective disorders, litte is known about the time relationship. The following study therefore examines the lifetime diagnoses of patients with somatoform disorders using a structured psychiatric interview. All diagnoses found can be ordered according to the time of onset. Thus, we can estimate how many subjects have somatoform disorders prior to affective disorders, how many subjects have somatoform disorders subsequent to affective disorders, and how many subjects have only somatoform disorders without affective or other psychiatric disorders.

A second goal of the study was to compare psychometric characteristics of somatoform disorder patients with patients suffering from affective and anxiety disorders. Therefore, the Symptom Check List SCL-90R (Derogatis et al. 1974), a self-rating scale with 90 items asking for psychopathology and psychosomatic symptoms, was given to the patients.

Method

Subjects

One hundred and thirty-one consecutively admitted inpatients of a psychosomatic hospital underwent a physical examination and were screened with a self-report scale for somatic symptoms. This self-report scale SOMS (Screening for Somatoform Symptoms; Rief et al., in press) consists of 53 items which correspond to the diagnostic criteria of somatoform disorders (i.e. symptoms of somatization disorder, inclusion and exclusion criteria, symptoms of other somatoform disorders). The categories for the item answers were Yes (symptom existed in recent years) and No (symptom was not present in recent years); possible symptoms of a somatization disorder were added to a sum score and inclusion and exclusion criteria were controlled. If results of previous investigations and the current physical examination left doubt of a possible organic origin of the disease, the subjects were excluded.

Those patients with more than four self-report symptoms typical of somatoform disorders ($n = 41$) underwent a standardized

diagnostic interview, the SCID (structured clinical interview for DSM-III-R diagnoses, see below) to test for a correct diagnosis of somatoform disorders. For 30 inpatients, the interview confirmed the diagnosis of somatoform disorder. Mean age was 38 years (range 25–57 years). Thirteen (43%) were male, 17 (57%) were female.

The results of the self-rating scales were compared with two other psychiatric groups, namely patients with major depression and patients with anxiety disorders. Patients of the anxiety group have been described by Rief and Fichter (submitted for publication). These subjects were diagnosed by DSM-III-R-trained physicians or clinical psychologists, but a standardized interview had not been used. The mean age of patients with major depressions ($n = 48$) was 50 years (SD = 10.1) and the sex ratio was 11 male: 37 female. The mean age of patients with anxiety disorders ($n = 51$) was 39 years (SD = 8.6) and the sex ratio in this group was 21 male: 30 female. Subdiagnoses of patients with anxiety disorders were panic disorders without agoraphobia ($n = 11$), panic disorders with agoraphobia ($n = 16$), and generalized anxiety disorders ($n = 24$).

Diagnostic interview

All patients with possible somatoform disorders were interviewed with the SCID to verify the diagnoses of somatoform disorders (Structured Clinical Interview for DSM-III-R; Spitzer and Williams 1987; Spitzer et al. 1990; German version, Wittchen et al. 1990). Additionally, the interviewer checked for diagnostic criteria for all DSM-III-R diagnoses of the SCID. The German version also allows the assessment of lifetime diagnoses. For each lifetime diagnosis, the time of onset was recorded. The class of depression NOS (not otherwise specified) was also included, restricted to patients who fulfilled all symptomatic criteria for dysthymia or major depression but not the time criteria (2 weeks for major depression, 2 years for dysthymia).

Self rating scale

The patients filled out the Symptom Check List SCL-90R (Derogatis et al. 1974). Possible item answers range from 0 (symptom did not occur during the past 7 days) to 4 (symptom occurred very strongly during the past 7 days). The 90 items of the SCL-90R are combined into 9 syndromes. The German version (CIPS, 1986) shows good agreement with the original English version, has good internal consistency and may discriminate between psychiatric groups (Rief et al. 1991).

Results

Comorbidity of SFD with other psychiatric disorders

Present state diagnoses of the 30 patients with SFD were somatization disorder ($n = 5$), somatoform pain disorder ($n = 7$), conversion disorder ($n = 1$), abridged somatization disorder (undifferentiated somatoform disorders, $n = 17$). Table 1 gives the comorbidity of somatoform disorder when only present state diagnoses are considered.

Of the patients with somatoform disorder, 63% currently had a depressive disorder. Of 17 patients with abridged somatization disorders, 3 had major depression, 7 dysthymia and 1 patient depression NOS. The fact that not only patients with somatization disorders showed a high concordance with depressive disorders, but also

Table 1. Comorbidity of present state DSM-III-R diagnoses and lifetime diagnoses in patients with DSM-III-R somatoform disorders

Diagnosis	Present state	Lifetime
Major depression	13%	47%
Dysthymia	27%	40%
Depression NOS	23%	13%
Panic disorder	13%	13%
Agoraphobia without panic	13%	17%
Obsessive-compulsive disorder	10%	10%
Bulimia nervosa, eating disorder NOS	13%	17%
Alcohol abuse	10%	20%
No other DSM diagnosis	23%	7%

NOS, not otherwiese specified.
Special remarks: multiple psychiatric diagnoses were examined. For dysthymia and major depression, DSM-III-R allows both diagnoses in some special cases. Therefore, the sum of all values for lifetime affective disorders is 100%; in reality, there are only 87% of patients with lifetime comorbidity of somatoform disorders and affective disorders (see text)

subjects with somatoform disorders, underlines the importance of the abridged somatization construct.

Another surprising fact is the high comorbidity with psychiatric diagnoses other than depression. Only 23% of the patients with somatoform disorder had no other psychiatric disorder. Studies which do not use standardized psychiatric interviews may underestimate the comorbidity with diagnoses such as eating disorders or substance abuse.

Lifetime comorbidity and sequence of psychiatric disorders

The most interesting point for lifetime diagnoses is the comorbidity of somatoform disorders with affective disorders (see Table 1). Twenty-six of 30 patients with somatoform disorders (87%) also had a history of an affective disorder. For this subgroup, the somatoform disorder preceded the depressive disorders in 19 of 26 patients (73%), while for 7 patients (27%), the affective disorders preceded the somatoform disorder. The time interval between the onset of the somatoform disorder and the begin of the affective disorder for the patients is illustrated in Fig. 1. For most patients, the time interval between the onset of the two disorders was more than 1 year (77%); for 46%, the time interval exceeded 5 years.

For 17 patients (57%), the somatoform disorder was chronologically the first disorder (primary somatoform disorder). Only two of this subgroup of 17 had no other psychiatric lifetime diagnosis. To test whether somatoform disorder may be just a prodromus of another psychiatric disorder, we computed the time interval between onset of primary somatoform disorder and onset of the first following psychiatric disorder for the 15 remaining patients. Again, we found long time intervals between onset of the two disorders; for 80%, the time interval exceeded 1 year, for 33%, it exceeded 5 years.
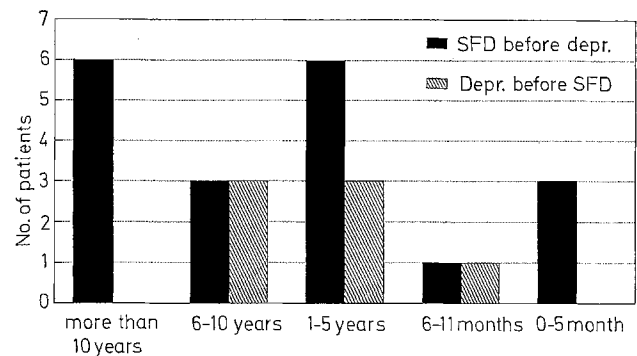
Fig. 1. Time intervals between onset of the first somatoform and the first affective disorder episodes ($n = 26$)

Onset, duration and gender differences

The age at onset of the somatoform disorder was significantly lower for women than for men (23.8 years for women, 29.4 years for men; $t = 1.8$, $P < 0.05$ (one-sided)). This is also true for the first psychiatric disorder (20.2 years for women, 27.5 years for men, $t = 2.3$; $P < 0.05$). Although the diagnostic symptom list of DSM-III-R has more items for women than for men, we did not find more somatoform disorder symptoms among women ($t = 0.6$; n.s.). This result is in accordance with Golding et al. (1991), who believed that there were few differences between men and women with somatization disorder; however, there may be different referral sources for women and men suggesting gender dependent physicians' perceptions of somatic symptoms.

The mean duration of the current somatoform disorder was 11.87 years; this implies that somatoform disorders are a chronic disorder and not limited to single episodes. Duration of illness was significantly shorter for men as compared with women (7.76 years vs 15.0 years, respectively; $t = 2.2$; $P < 0.05$).

SCL-90-R-results

It was hypothesized that the results of the SCL-90R would show that patients with somatoform disorders had the highest values in the "somatization"-subscale, while the "depression" subscale would discriminate patients with major depression; the "phobia" and "anxiety"-subscales were expected to be elevated in patients with anxiety disorders. Because the comparision groups of anxiety and depressive disorders did not undergo a structured psychiatric interview, the following results may only show trends.

The results of the nine dimensions of the symptom check list SCL-90R were analyzed using MANOVA. There was a significant main effect for diagnostic groups (Pillais = 0.66; df = 18,232; $P < 0.001$). The following F-tests with each subscale of the SCL-90R revealed significant diagnostic group differences for the dimensions "obsessive/compulsive" ($P < 0.05$), "depression" ($P < 0.01$) and "phobic anxiety" ($P < 0.001$). Patients with somatoform disorders showed the highest mean values for "somatization", but this effect did not reach statistical significance. Patients with major depression showed

significantly elevated scores for "obsessive/compulsive" and for "depression", while patients with anxiety disorders demonstrated the highest mean values for "phobic anxiety". Thus the SCL-90R appeared to be adequate for the differentiation of anxiety and depressive disorders, but failed to discriminate somatoform disorders from other psychiatric disorders. Subsequent discriminant analysis underlined this observation: while hit rates for depressive (85%) and anxiety patients (84%) were high, for patients with somatoform disorder the hit rates were lower than the level of chance (30%). Therefore, the SCL-90R is not sensitive enough to identify patients with somatoform disorders.

Discussion

In the present study, a structured clinical interview for psychiatric disorders (SCID) was used to evaluate current and lifetime DSM-III-R diagnoses of patients with somatoform disorders (Wittchen et al. 1990; Spitzer & Williams 1987; Spitzer et al. 1990). This standardized procedure allows more reliable diagnoses and onset specifications of mental disorders. On the other hand, the retrospective examination of lifetime disorders may reduce the validity of the data. Therefore, these results are exploratory and need further confirmation through longitudinal studies.

The DSM-III-R diagnoses of somatoform disorders do not cover all commonly called "somatization"-symptoms. Tachycardia or palpitations are also symptoms of anxiety disorders, especially of panic disorders and must be diagnosed there. Many affective disordered subjects show somatoform symptoms not fulfilling criteria for somatoform disorders. In our sample of 131 inpatients, we also found many somatic symptoms in subjects not fulfilling criteria of somatoform disorders (back pain 75%, dizziness 71%, palpitations 68%). Therefore, the term "somatization" is not confined to somatoform disorders, whereas our results primarily are.

The present data confirm the high comorbidity of somatoform and affective disorders (c.f. Morrison and Herbstein, 1988). Of our patients, 63% currently suffering from somatoform disorders also meet DSM-III-R criteria of an affective disorder. The lifetime prevalence of affective disorder in patients with a present diagnosis of somatoform disorders was 87%. The present study demonstrates that a high comorbidity with affective disorders is not only found for somatization disorders, but also for patients with somatoform symptoms below the diagnostic threshold of somatization disorder ("abridged somatization disorder"; Escobar et al. 1989).

One theory concerning the association of affective disorders and somatoform disorder proposes that somatoform symptoms are possible subsymptoms of depressive disorders (c.f. "somatized depression"). Silver (1987), for example, formulated that "physical complaints are part of the core depressive syndrome". On the other hand, Silver did not use DSM-III-R criteria for somatoform disorders. Persson and Sjöberg (1987) used time series analysis for the correlation of mood and physical symptoms. In their study, current physical symptoms were the dominating explanatory factor for reports on mood, not vice versa. Our results did not confirm the hypothesis that somatoform symptoms are only part of a complex affective syndrome. Episodes of somatoform disorders were clearly distinguishable from episodes of depression, as can also be seen in most cases where somatoform disorders were the first psychiatric disorder, long before depressive episodes occurred. Finally, while affective disorders are often characterized by an episodic course with interim remissions, our patients with somatoform disorders showed a more chronic course with long durations of illness.

A second possibility may be that the two disorders share common underlying processes (e.g. neurobiology, vulnerability for life events), which may find expression at one time as somatoform symptoms and at another time as affective symptoms. There is increasing evidence that somatoform disorders are triggered or tuned by negative life events (de Leon et al. 1987; Chiu and Rimón 1987; Scaloubaca et al. 1988; Robinson et al. 1990). This effect of life events had already been demonstrated for depressive symptoms (Brown and Harris 1982; Shrout et al. 1989; Garnefski et al. 1990). Characteristics like focus of attention and augmentation of psychological and bodily changes may be additional processes influencing the onset of depressive and somatoform symptoms (Kellner et al. 1987). Dysregulation of serotonin-metabolism may also constitute a common underlying process of somatoform disorders and affective disorders.

Lipowski (1987) assumed that "somatization is neither a disorder nor a diagnostic category but rather a generic term for a set of experimential, cognitive, and behavioral features". However, we did find clearly distinguishable and long-lasting episodes of somatoform disorders which were not always accompanied by other mental disorders. In addition, somatoform disorders were accompanied by strong psychological, social and bodily discomfort. Therefore, we believe that it was useful to define a seperate diagnostic category for these patients, as was done in DSM-III. The proposal of Escobar et al. (1989) to define an abridged somatization disorder also appears useful; our patients with somatoform disorders showed characteristics similar to those of patients with a complete somatization disorder.

In addition to the high comorbidity of affective and somatoform disorders, we also found considerable comorbidity with other psychiatric disorders; 40% of our somatoform disordered patients also had a history of anxiety disorders. It can be speculated that somatoform disorders and anxiety disorders also share common biological and other vulnerability factors. On the other hand, the occurrence of one disorder may trigger the other. Panic attacks, for example, may lead to an amplifying style of self-perception, which may favor the occurrence of somatoform symptoms.

The recent addition of the category of somatoform disorders requires further research in this area. Therefore, psychological tests are necessary for diagnostic and evaluation procedures. The "somatization"-scale of the SCL-90R failed to show significant differences between

somatoform, anxiety and major depressive disorders, although the mean values of somatoform disorder-patients were elevated. This failure may by due to higher scores in anxiety and depressive disorders; the SCL-90R did not differentiate between somatic symptoms during a panic attack and persisting somatic symptoms of somatoform disorders. Moreover, because we did not use standardized interviews in our depression group, it may be that some of these patients with depression had an additional somatoform disorder. Perhaps we would achieve a better discrimination by only comparing patients with somatoform disorder (but without depression) with patients with depression without somatoform disorders.

Fabrega et al. (1988) also examined the differences between anxiety, depressive and somatoform patients and found some specificities of subjects with somatoform disorder such as hyposomnia, decreased weight, decreased motor activity and somatic preoccupation. This leads to the assumption that symptoms not contained in the SCL-90R "somatization"-scale must be used to discriminate the group of somatoform disorders. A German self-rating scale, checking for the DSM-III-R-criteria of somatoform disorders, in combination with a physical examination was able to identify 73% of patients with somatoform disorder (Rief et al., in press). Psychological tests therefore should not only check for general psychosomatic symptoms, but also for criteria specific to the somatoform disorder-patients in order to be good diagnostic and evaluation instruments.

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