

Conversion “V” Profiles in Torticollis

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The assumption that spasmodic torticollis represents a conversion reaction was examined by evaluating profiles of 61 patients on the hypochondriasis, depression, and hysteria scales of the Minnesota Multiphasic Personality Inventory. Thirty-six per cent of the sample had normal profiles. A conversion “V” profile with scores above 70 was found in a minority (9%) of the patients. The profile of the majority of the group was characterized by the presence of mild depression. It was concluded that a personality profile suggestive of conversion reaction is not typical of patients with spasmodic torticollis.

Introduction

The failure, until recently, to find any convincing evidence for a pathological basis for spasmodic torticollis has contributed to the longevity of the psychogenic model of the disorder. Four different major assumptions can be implied in this model:

- 1 The onset of the disorder is preceded by psychological trauma;
- 2 Psychiatric illness is a characteristic feature at the onset of the illness;
- 3 The patients have abnormal personality characteristics, more specifically that they are introverted, neurotic, anxious and obsessional;
- 4 The disorder represents a hysterical conversion reaction.

The first three possibilities have been examined and refuted in earlier studies (Jahanshahi and Marsden, 1988*a,b*). A group of patients with torticollis did not differ from an equally chronic group of cervical spondylosis sufferers in terms of psychosocial trauma or other types of events prior to onset (Jahanshahi and Marsden, 1988*b*), or with regards to prevalence of psychiatric disorder prior to or after onset of their disorder (Jahanshahi and Marsden, 1988*a*). Furthermore, there were no differences in any aspects of personality (neuroticism, introversion, trait anxiety, obsessionalism) between patients with torticollis and the cervical spondylosis sufferers. In both groups only a minority of the patients had “neurotic” personality profiles (Jahanshahi and Marsden, 1988*b*). From a review of the literature, it was noted that a pattern of high neuroticism, low extraversion, high anxiety and obsessionalism also appeared characteristic of other groups of patients with

This work was supported by a grant from the Medical Research Council.

chronic neurological or physical disorders. The profile, therefore, seemed neither typical of, nor exclusive to, patients with torticollis. It was suggested that destabilization of personality, similar to depression may be a by-product of the physical and social disability experienced by some torticollis patients as well as sufferers of other neurological or medical disorders (Jahanshahi and Marsden, 1988*b*).

The fourth assumption of the psychogenic model, that torticollis is hysterical in nature (Engel, 1970; Mitscherlich, 1971) was not directly examined in the earlier study (Jahanshahi and Marsden, 1988*b*). The "conversion V" pattern on the Minnesota Multiphasic Personality Inventory (MMPI), that is high scores on hypochondriasis (Hs) and hysteria (Hy) scales, coupled with low scores on the depression (D) scale, has been considered as evidence for a conversion disorder, whereby the patient converts personally distressing psychological problems into more socially acceptable somatic complaints (Greene, 1980). The aim of the present study was to examine the pattern of scores obtained by torticollis patients on the Hs, D, and Hy scales of the MMPI, in order to determine whether a conversion "V" profile was characteristic of the sufferers of this disorder.

Method

Subjects

Sixty-one patients with idiopathic spasmodic torticollis participated in the study. The sample consisted of 32 (52.5%) males and 29 (47.5%) females. Their mean age was 53.4 years (s.d. = 12.4). The average duration of illness was 12.8 years with a range of 3.4 to 56.6 years. The mean age of onset of torticollis was 40.6 years (s.d. = 14.9).

Material

A shortened version of the Minnesota Multiphasic Personality Inventory (MMPI, Hathaway and McKinley, 1940) was completed by all patients. Items from the first 3 scales of the MMPI (hypochondriasis (Hs), depression (D), and hysteria (Hy)) together with the F, K, and L validity scales were included. The standard instructions were used, and subjects were instructed to respond "true" or "false" to each item. The Hs scores were K-corrected, and all scores were converted to standard or T scores. Measures of the clinical severity of torticollis were also obtained in the form of ratings of extent of control over head position (0-10 rating: 0 = no control, 10 = complete control), degree of disfigurement (0-10: 0 = not at all disfigured, 10 = very disfigured), and experience of cervical pain and its severity (0 = no pain, 5 = severe pain).

Procedure

The present results were obtained as part of a follow-up study of 100 patients with spasmodic torticollis. Detailed information about the procedure used has been provided elsewhere (Jahanshahi, 1989). The response rate was 81%. There were no differences between those who did or did not participate in the follow-up study, in terms of demographic characteristics or clinical features of torticollis (Jahanshahi, 1989).

Results

On the shortened MMPI, data for 2 patients were missing, while a further 6 cases were eliminated because of "?" (don't know) scores on 5% or more of the items. The mean transformed scores of the remaining cases are presented in Table 1. There were no sex differences on any of the three validity or Hs, D, and Hy scores (Multivariate $F(6,46) = 0.90$, $p = 0.50$).

A cut-off point of 70 (which is 2 standard deviations from the mean transformed score of 50) is usually used to distinguish scores falling within normal and abnormal ranges (Green, 1980). The mean scores of the patients on the Hy and Hs scales were below this cut-off, although the mean depression score was equal to 70. Nineteen patients (35.8%) had normal profiles on the MMPI: their scores on all the validity and clinical scales was less than 70. The number of patients with scores equal to or above 70 on the HS, D, and Hy scales was respectively 16 (30.2%), 30 (56.6%), and 13 (24.5%). The criteria (a. $K < 60$ b. $Hs > D$ and $Hy > D$ or $Hs > D > Hy > 70$ or $Hy > D > Hs > 70$) set out by Pichot *et al.* (1972) were used to determine the percentage of cases who had a conversion "V" profile. The conversion "V" configuration was found in 7 cases (13.2%), 2 of whom had normal profiles as all their scores were below 70. In contrast, 31 patients (58.5%) had D scores that were higher than both the Hy and Hs scores.

The Pearson correlation coefficients between the Hy, D, and Hs scales were all positive and significant at $p < 0.001$ (D with $Hy = 0.59$; D with

TABLE 1. Means and standard deviations of the standardized or T scores on the Hypochondriasis, Depression, and Hysteria scales of the MMPI, and the L, F, and K validity scores

MMPI scores	Mean	SD
Hypochondriasis (Hs)	63.6	12.7
Depression (D)	70.4	15.8
Hysteria (Hy)	64.8	9.9
L	53.1	6.3
F	58.2	10.3
K	54.2	8.4

TABLE 2. *Pearson correlation coefficients showing the association of scores on the Hs, D, and Hy scales of the MMPI with age, age of onset of torticollis, duration of illness, degree of head control, cervical pain severity, and disfigurement ratings*

	<i>D</i>	<i>Hy</i>	<i>Hs</i>
Age	-.09 (.26)	-.02 (.45)	-.01 (.48)
Age of onset	-.01 (.49)	.08 (.29)	.08 (.29)
Duration of illness	-.05 (.35)	-.10 (.24)	-.13 (.18)
Head control	-.26 (.03)	-.18 (.09)	-.24 (.04)
Pain severity	.14 (.19)	.45 (.002)	.45 (.001)
Disfigurement	.46 (.001)	.29 (.02)	.28 (.02)

$H_s = 0.61$, H_y with $H_s = 0.79$). The Pearson correlation coefficients showing the associations of the H_s , D , and H_y scores with age, age of onset of torticollis, duration of illness, degree of head control, cervical pain severity, and disfigurement ratings are presented in Table 2. Age, age of onset of torticollis, and duration of illness were unrelated to the MMPI scores. The various ratings of the clinical severity of torticollis had small to moderate correlations with the D , H_y , and H_s scores, the majority of which were significant.

Discussion

The aim of the present study was to determine whether MMPI profiles of torticollis patients were suggestive of conversion disorder. The mean scores of the group on the H_s , D , and H_y scales of the MMPI were midway between scores reported for normals (Gough, 1963; Prokop, 1986) and patients with mild neurosis (Gough, 1963). This pattern of MMPI scores confirms the findings of the previous study of torticollis patients on measures of intraversion, neuroticism, trait anxiety, and obsessiveness (Jahanshahi and Marsden, 1988*b*), and was also noted to be characteristic of scores obtained on various personality measures by sufferers of other physical and neurological disorders.

In effect, 36% of the sample had normal MMPI profiles with scores on all scales being below 70. Scores above 70 on the H_s , D , and H_y scales were respectively obtained by 30%, 57% and 25% of the sample. The reason for the finding that a quarter to one-third of the sample obtained scores above 70 respectively on the H_y and H_s scales, may partly reside in the structure of these scales. The items of the H_s scale have been selected to measure concern over bodily health (McKinley and Hathaway, 1963), and partly overlap with those of the H_y scale. Patients suffering from genuine physical and

neurological disorders, especially those cases preoccupied with their symptoms are, therefore, likely to obtain higher scores on these scales.

Most importantly, the mean scores did not represent a conversion "V" pattern. Using the criteria delineated by Pichot *et al.* (1972), a conversion "V" configuration with scores above 70 was only found in 5 (9.4%) cases. It is difficult to determine the precise significance of such a conversion "V" profile in 9% of the torticollis cases. However, the fact that 22.5% of low-back pain sufferers with organic evidence for their complaint had such a profile (Leavitt, 1985), suggests that it might represent factors other than presence of a conversion disorder. As the 5 patients with a "V" profile had a significantly shorter duration of illness compared to the rest of the sample ($t=2.2$, $df=59$, $p<0.03$), such a profile perhaps reflects preoccupation with the disorder earlier in the course of the disorder.

Instead of the conversion "V" pattern, the profile for the majority of the group (58.5%), was characterized by scores on the D scale being higher than Hs or Hy scores, which fits another neurotic triad configuration, the reverse "V" pattern. This overall picture of high scores on the depression scale shows that the patients are distressed by their disorder. This constitutes evidence against the essential criterion of "la belle indifference" used in the diagnosis of conversion reactions. Two other aspects of the results also argue against the representativeness of a conversion "V" profile. First, the conversion "V" pattern, would lead to the expectation of decline in D scores with increases in Hs and Hy (Leavitt, 1985). The correlations between scores on the D, and the Hy and Hs scales were positive and significant, implying that scores on these scales changed in the same direction. Second, scores on the three clinical scales of the MMPI were significantly related to the clinical features of torticollis, namely degree of head control, extent of disfigurement and cervical pain severity, thus suggesting that elevation of the MMPI scores reflect the extent of disability. Therefore, the present results provide further evidence against the psychogenic model by showing that a personality profile suggestive of a conversion reaction does not characterize torticollis sufferers. This conclusion is in accord with the results of Choppy-Jacolin *et al.* (1977) who assessed 34 torticollis patients on the MMPI and noted that "there is nothing to suggest that the personality of these patients has a hysterical structure".

Although cases of psychogenic dystonia are a reality (Lesser and Fahn, 1978; Fahn *et al.*, 1983; Batshaw *et al.*, 1985; Fahn and Williams, 1988), they constitute a small minority of patients seen in Movement Disorders Clinics. Only 5 of more than 400 dystonic patients in Marsden's (1986) series, 21 of 814 patients (2.6%) seen by Fahn and Williams (1988), and 1 of 85 cases (1.2%) reviewed by Lesser and Fahn (1978) were documented as psychogenic. What is more common, is initial misdiagnosis of idiopathic dystonia as psychogenic. Such initial misdiagnosis has been reported in 24.7% (Cooper *et al.*, 1976), 43% (Marsden and Harrison, 1974), 44% (Lesser and Fahn, 1978), 50% (Marsden, 1986), and 52% (Herz, 1944) of dystonia sufferers seen in various neurological clinics. This misdiagnosis still occurs, as shown by a recent survey of patients with idiopathic torticollis, 60% of whom

noted that at some point in the course of torticollis, they had been told that the disorder was psychogenic (Jahanshahi and Marsden, unpublished data). Therefore, despite the fact that torticollis is now considered an organic disorder by neurologists, this view does not evidently predominate at all levels of the medical profession.

Identification of the precise organic basis of primary dystonia, and the potential development of laboratory/scanning diagnostic tests, would allow objective differentiation of the few cases of psychogenic dystonia from the majority of idiopathic sufferers and could prevent the currently prevalent misdiagnosis. However, such evidence about the organic basis of torticollis has as yet not been forthcoming from the few pathological and brain scanning studies. In the absence of such direct evidence, the alternative and indirect approach taken in the present and previous study (Jahanshahi and Marsden, 1988*b*) refute the assumptions of the psychogenic model of the disorder in patients with a clinical diagnosis of idiopathic torticollis.

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