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Occasional review

The pre-morbid personality of patients with Parkinson's disease

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SUMMARY A review of the extensive descriptive literature suggests that many Parkinsonian patients exhibit an emotional and attitudinal inflexibility, a lack of affect and a predisposition to depressive illness, which may antecede the development of motor abnormalities by several decades. Introspective, over-controlled, anhedonic personality traits together with suppressed aggresivity are frequently found. It is unclear whether these behavioural patterns are relevant aetiological factors or prodromal symptoms of the disease.

Undeterred by the inherent difficulties in analysing retrospectively the Parkinsonian personality, neurologists and psychiatrists have speculated on the possible existence of a distinctive pre-morbid personality. Charcot[1] considered that the emotions combined with hereditary factors played an essential role in the pathogenesis of idiopathic Parkinson's disease. Janet[2] assembled a series of carefully analysed clinical observations and concluded that emotional tensions were important in the genesis of the disease. More recently, Prichard *et al*[3] have taken this view further and suggested that chronic emotional stress may cause chemical changes within the brain, predisposing individuals to Parkinson's disease. However, in the late 1960s an influential study by Riklan *et al*[4] on 108 patients using interviews and a neuro-psychological test battery, concluded that no typical Parkinsonian personality existed. This led to the contemporary view that although the motor disabilities of Parkinson's disease are profoundly influenced by anxiety, depression and fatigue the disease is not caused by psychogenic factors.

Camp[5] in 1913 was the first to claim that Parkinsonians have in common an industriousness and a moralistic attitude to life. Jelliffe[6] emphasised the role of chronic conflict and recognised a particular personality type who seemed unable to gratify aggressive needs. Booth[7] described the typical Parkinsonian as making a religion of success and dwelling on his failing function. His patients appeared to him to be constantly striving for independence from outside interference and seeking freedom from authority albeit within a framework of social conformity. Tensions were rigidly suppressed and emotional reactions and impulses were only revealed when considered consistent with the ideal personality for which the Parkinsonian to be was striving. He also considered that many of his patients adopted a social mask behind which they hid strong hostile and sadistic impulses. He concluded that the health of the potential Parkinsonian depended on a dynamic balance between an active independent self-assertive life on the one hand and a rigid constriction of social responsibility on the other. He considered that the disease process began when this equilibrium was upset by frustrated activity, loss of independence or violation of the ideal pattern through excessive aggression. Most of his patients had been instilled from early childhood with the idea that they should act according to social norms and not in response to their personal feelings.

Sands[8] re-emphasised Booth's views, noting Parkinsonians to have been law-abiding citizens, giving much of their time to their homes and families and

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considering them to be trustworthy and diligent with considerable aggressive and sexual drive. He described them as masked personalities with an excessive degree of self-control, repressing emotional and instinctive drives. He also felt that constant repression of these natural tendencies might ultimately lead to intensive over-activity in the cerebral cortex and basal ganglia promoting degenerative changes. He stated that in the decade before the publication of his paper, he had observed four people whom he had known for over a quarter of a century who had possessed this type of personality and had developed Parkinson's disease.

Machover[9] considered that the personality of Parkinsonians whose illness was of short duration was heterogeneous, while those of long duration showed a constriction, mental rigidity and inertia; a homogeneity which he attributed to living with the illness. Riklan *et al*[4] however, were of the opposite view, claiming that it was the initial onslaught of the illness which had the most severe psychological consequences and the experience of living with the disorder often had an adaptive effect. Mitscherlich[10] studied 40 patients, all of whom he considered to have a compulsive neurotic character, and to lack self-assertiveness. He also considered the pre-morbid personality to be one of industriousness, exactness and great ambition. When hiding under the mantle of authority these individuals were able to assert themselves but not at other times and, as a result job-achievement was decisive for their well-being. As a group they tended to work in their spare time and find little pleasure in hobbies. Mitscherlich believed that these behaviour patterns were laid down in early childhood at around the age of two years, when affective life was profoundly influencing the motor system. He believed that at this age the child is learning how to approach people and things, how to act and how to physically attack and defend himself, and, like Freud, he regarded thought as trial of action. Motor processes are at the service of the developing self in its control of inner impulses and environmental demands. The pyramidal system is concerned with deliberate purposeful movement, but it is the extra-pyramidal system which translates affection, emotion and mood into deportment and which can be stimulated by affect. Mitscherlich[10] regarded lack of self-assertiveness to be central to the Parkinsonian state, susceptible individuals having a permanent readiness for motor activation, but inhibition led to motor blocking and ambivalence.

Lit[11] studied the pre-morbid personality in 50 patients and found that Parkinsonians had a limited range of emotional expression and a withholding tendency. Following the development of the illness he noted an obsessive and habitual preoccupation with the body image, marked mental rigidity and a fixed rejection of external stimuli. He concluded that Parkinson's disease was a disorder of the total personality of which disintegration of motor function was the ultimate expression. Prick[12] commented on the mental inflexibility, moral rigidity and perfectionistic approach to life of many patients. A number appeared to have a manic-depressive colouring to their mood patterns and difficulty coping with emotional stresses. He noted them as a group, to be courteous, polite, honest, trustworthy, altruistic, conscientious, punctual and to have a strong desire to assert themselves socially. He also found them to be rigid, persevering, "pushers" who had considerable inward aggressive drive, but at all times avoided harming others. He also commented that the parents and siblings of Parkinsonian patients had difficulty in expressing their emotions and that children brought up in this environment developed a psychasthenic form of emotional behaviour which led to a functionally defective maturation of the motor nervous system.

Korten and Ketterings studied 80 patients admitted for stereotactic surgery and concluded that although one could not speak of a definite personality-type in Parkinson's disease a number of common traits were recognisable. For example: the Parkinsonian appeared to regard the world not as a gift but as a challenge, was lacking in self-confidence and had no education in *savoir-vivre*. A self-imposed, cramped style prevented spontaneity of thought or self-expression and many appeared to be blocked in affect. They also noted that one would rarely find a Parkinsonian patient who would discard social norms, who was uninhibited and wasteful or who had little interest in his work. They considered the Parkinsonian patient developed over the years a form of passive defensiveness and self-protection which led to inflexibility and difficulty in expressing aggression. De Mol[14] studied 20 patients using the Rorschach test and concluded that Parkinsonian patients exhibited a narrowing of ideas and affect and narcissistic and hypochondriacal regression. He was able to detect a sub-group of patients who were rigid and inflexible in their approach but concluded that it was more probable that it was the disease itself which led to these changes rather than any pre-morbid personality traits. He also believed that in certain cases Parkinson's disease favoured the emergence, resurgence or the accentuation of pre-existing elements within a personality, as well as being an expression by way of neurological symptoms, of aggressive tendencies not having any other outlet.

A recent study by Poewe and colleagues[15] on 28 patients with idiopathic Parkinson's disease using

family interviews and the Giessen psychometric personality inventory, also revealed distinctive personality traits. Patients and spouses were instructed to fill out in a retrospective manner the questionnaire, addressing their answers to the patients personality before the onset of the disease. It was found that compared with controls Parkinsonian patients tended to be introverted, reliable, responsible, subordinate, loyal and to lack flexibility. Further support for the possibility of a characteristic pre-morbid personality-type also comes from the identical twin studies by Ward and colleagues[16] in which behavioural differences were found as early as the first decade of life between the affected and non-affected sibling. The affected twin tended from early childhood to be less "usually the leader" and "more self-controlled" and by the age of 16 they were also more "nervous". Ten years before the development of Parkinson's disease they had become "less aggressive, quieter and less confident and light-hearted", than their un-affected sibling. In the period prior to the onset of the disease, the unaffected twin had also smoked significantly more cigarettes than had the twin with Parkinson's disease. This latter observation is in agreement with a number of other epidemiological studies which have shown that Parkinsonian patients tend to be habitual non-smokers.[17,18] It has been suggested that compared with non-smokers adult smokers tend to be more impulsive, arousal seeking, danger-loving and risk-taking and to be more belligerent towards authority.[19] These are behavioural characteristics normally associated with an extroverted personality and would be in keeping with the general view of an introverted pre-morbid personality type in Parkinsonians. This seems a more attractive notion than assuming a protective effect of smoking against the development of the disease. It is also of considerable interest that patients with ulcerative colitis also tend to be non-smokers before the onset of the illness[20] and similar pre-morbid personality traits have been ascribed to this condition.[21] One of the authors of the present paper has seen five patients with both Parkinson's disease and ulcerative colitis, none of whom smoked cigarettes.

It is generally accepted that a depressive illness may usher in the motor symptoms of Parkinson's disease, but it has been less widely appreciated that a considerable number of Parkinsonians suffer with severe depressive illnesses in early adult life. In one study, for example, 20% of 176 patients had required psychiatric attention for major depressive illness before the appearance of motor disabilities.[22] Parkinsonian patients who develop the disease in the fourth and fifth decades of life seem to be particularly liable to have had an earlier history of depression. Poewe and colleagues[15] also noted that premorbidly many patients were over-controlled and of a depressive predisposition. Winokur and his colleagues[23] were unable to find that first degree relatives of Parkinsonian patients showed a higher than expected lifetime prevalence of affective disorder. Todes,[24] however, in his personal account was impressed by the psychosomatic link between Parkinson's disease and depression in relationship to bereavement experienced in early childhood. The occurrence of motor retardation and bradyphrenia in both depression and Parkinson's disease also suggests shared biological mechanisms.

What is remarkable, reviewing these studies is the surprising degree of uniformity of opinion. The inherent problem however, remains the difficulty in distinguishing between pre-morbid personality characteristics and those which develop following the appearance of the classical symptoms of the illness. However, this should not prevent further attempts at assessing pre-morbid personality by means of the newer hostility and personality rating scales and by structured interviews with spouses and other family members. Attempts to correlate life-events with depression and subsequent Parkinsonism, particularly in the young onset cases would also be of interest.

Whilst it may be difficult to predict direct clinical benefits from establishing links with pre-morbid personality, the knowledge gained will deepen understanding of the Parkinsonian patient and enrich the overall therapeutic approach. It is also conceivable that many of these particular personality traits may stem from an inherent difficulty in switching flexibly from one mental concept to another as has been described in early Parkinson's disease.[25]

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