

# Severe Weight Loss in a Young Parkinson's Disease Patient: A Multidisciplinary Approach to Diagnosis and Treatment

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**P**arkinson's disease is a chronic and progressive neurodegenerative disorder affecting dopaminergic neurons of the nigrostriatal pathway. The classical symptom's triad as described by James Parkinson in 1817 consists of tremor, bradykinesia and rigidity. Patients may also develop non-motor symptoms such as alterations in autonomic and emotional functions, and changes in cognitive abilities [1], especially motivational changes and cognitive decline, which affect the activities of daily life. Progress in phar-

macology has markedly improved the treatment of early Parkinson's disease, and longevity has substantially increased with dopamine replacement therapy such as levodopa. However, advanced-stage Parkinson's symptoms respond incompletely to levodopa, and together with long-term complications of dopaminergic treatment, it progressively leads to severe disability [2]. Hence, the management of advanced Parkinson's symptoms remains a challenge, and the disabilities in daily life activities often require the help of a caregiver.

## PATIENT DESCRIPTION

A 49 year old woman was admitted with nausea and vomiting. Her history was remarkable for the diagnosis of

Parkinson's disease 6 years earlier, but she refused treatment due to fear of side effects. During the following years she became gradually bedridden.

On admission the patient was bedridden and cachectic. Her face had an erythematous rash consistent with seborrheic dermatitis. Her eyes appeared staring and her teeth status was poor. Moderate dermatitis was observed on both of her hands [Figure A], and hypertrichosis lanuginosa was apparent on her back and abdomen [Figure B]. Neurological examination revealed rigidity of both arms and legs more pronounced on the left side, and a resting tremor but no action tremor in both hands. She was not able to sit or stand by herself. Laboratory results were within the normal ranges except for low levels of folic acid (2.6 mg/

**[A]** Moderate dermatitis and severe muscle atrophy of the patient's hands



**[B]** Hypertrichosis lanuginosa on the patient's back

dl). Her calculated body mass index was 13.5.

According to the clinical findings and laboratory results, an eating disorder was suspected. The patient denied loss of appetite, fear of gaining weight, intentional vomiting or any use of laxatives. Psychiatric examination did not reveal any sign of an eating disorder but the psychiatrist pointed to a socio-psychological problem in the family setting. According to family anamnesis, one of the sisters and the patient's mother encouraged the patient not to eat in order to maintain her at a certain low weight in order to facilitate her care. Neurological evaluation by a neurologist, who by chance was the same who first diagnosed her disease 6 years earlier, confirmed the diagnosis of Parkinson's disease and convinced the patient to begin dopaminergic treatment.

The patient was started on Sinemet CR<sup>®</sup> (carbidopa-levodopa sustained release, MSD), together with a dietician-oriented plan for weight gain, family counseling, and physiotherapy. With this multidisciplinary approach and reinforcement by the staff, the patient began to eat regularly and her motor condition gradually improved. After 3 weeks she was discharged to a rehabilitation facility.

## COMMENT

We present a young patient with severe untreated Parkinson's disease suffering from chronic severe weight loss due to reduced food intake. Progressive weight loss down to overt malnutrition is a major feature of the disease's progression, since

the disease contributes substantially to changes in the nutritional status [for review see 2]. During the course of the disease, reduced energy intake contributes to weight loss. In addition, hyposmia, a common non-motor symptom in Parkinson's, together with the decline in motivational and cognitive functions may contribute to the lowered energy intake since they affect interest in food and eating habits. Dysphagia and gastrointestinal dysfunction, possible manifestations of the neurodegenerative process affecting both the central and peripheral nervous system, can also lead to hindered food intake. Notably, alterations in gastric and intestinal motility seem to be associated with abdominal distension, discomfort, and nausea, which may also explain both the patient's decreased food intake and her presenting complaints.

Interestingly, soon after the patient started consuming an enriched diet she did not report any nausea. Thus it seems unlikely that neurological symptoms caused the chronic weight loss. Even though no neuropsychiatric symptoms were found to explain the reduced food intake, the patient's very low nutritional status was similar to an eating disorder with severe weight loss, and she had dermatological signs of anorexia nervosa [3].

Notably, our patient was living with one of her three sisters and her mother, who acted as her primary caregivers. In the past, both the sister and the mother declined the medical treatment for the patient's Parkinson's disease, instead preferring "natural treatment" and physiotherapy. In addition, they intention-

ally reduced the patient's food intake in order to lower her weight to enable easier handling. The term "informal caregiver" refers to family members and friends who provide nearly three-quarters of the care given to impaired adults living in the community. It is known that sometimes domestic mistreatment can occur in home caretaking by informal caregivers [4]. The spectrum includes verbal aggression, active and passive neglect, psychological violence, physical abuse, denial of privacy, denial of participation in decision making, and financial exploitation [5].

In summary, this case illustrates a family-mediated abuse of a young Parkinson's disease patient mimicking a life-threatening eating disorder. A multidisciplinary approach successfully led to regular medical treatment, weight gain and rehabilitation.

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**“Kill me, or else you are a murderer”** (on his death bed, to his doctor)

Franz Kafka (1883-1924), Czeck author considered to be one of the major writers of the 20th century. The term “Kafkaesque” has become part of the English vernacular. (Quoted from the book *Mirrors* by Eduardo Galleano (Nation Books, New York, 2009, p. 264, and contributed by M.N. Lowenthal MD)

**“To know how to say what other people only think is what makes men poets and sages; and to dare to say what others only dare to think, makes men martyrs or reformers, or both”**

Elizabeth Rundle Charles (1828-1896), English writer