Upper extremity contractures heralding Parkinson’s disease

To the editor,

Limb problems in Parkinson’s Disease (PD), although rare, are well documented. The exact incidence of limb contractures in PD is unclear but probably underestimated. Limb contractures usually occur in the late stages of the disease. We report an unusual case in which upper limb contractures occurred before the diagnosis of PD was made.

A 65-year-old man was admitted for evaluation of a 4-month history of pain and stiffness in both hands and arms. He indicated that the very first symptoms had been mild pain and stiffness accompanied by heaviness in his left arm and left leg 1 year earlier. At admission, he reported difficulty using his hands and arms in everyday activities, particularly dressing, and recent difficulty in walking. He had no history of a disease likely to explain the symptoms. The physical examination showed flexion contractures in both elbows and in the metacarpophalangeal joints and proximal and distal interphalangeal joints; range of motion restriction in the right shoulder; rigidity predominating in the left upper limb; bilateral stiffness and resting tremor in both hands; and bradykinesia. The lower limbs were normal. Motor function, sensation, and reflexes were normal. No other neurological abnormalities were noted. Findings were normal from laboratory investigations including blood cell counts, erythrocyte sedimentation rate, hepatic and renal function tests, C-reactive protein, rheumatoid factor, antinuclear antibodies, complement, and immunoglobulins. Roentgenograms were normal. He was referred to the neurology department, where he was given a diagnosis of idiopathic PD and started on levodopa, 125 mg/day, with physical therapy during the first month. The contractures improved in both hands and elbows. At last follow-up 6 months later, the contractures and other symptoms had improved noticeably.

Hand deformities in PD, although rare, are well documented [1,2]. Their pathogenesis is incompletely understood. Bromocriptine therapy, striatal dopaminergic deficiency (particularly in long-standing disease), and over activity of the small hand muscles have been incriminated [3–5]. The development of contractures early in the course of PD in our patient is not only unusual but also suggests that other mechanisms may be involved. In particular, the possibility of non-dopaminergic lesions should be borne in mind to ensure a prompt differential diagnosis.

Our case shows that upper limb contractures causing functional impairment during everyday activities can be the first manifestation of PD. The risk of misdiagnosis is high if PD is not considered routinely in patients presenting with upper limb contractures. Further studies are needed to clarify the pathophysiology.

References