Movement Disorders
CLINICAL PRACTICE

HOW DO I ?

How Do I Examine Postural Disorders in Parkinson's Disease?

Lucia Ameghino, MD,[1] Malco Rossi, MD,[1] Marcelo Merello, MD, PhD[1,2,]*

Abstract: Postural abnormalities in Parkinson's disease (PD) are considered the rule more than the exception and are disabling complications of the disease. These deformities include camptocormia, antecollis, Pisa syndrome, and scoliosis. Evidence to date suggests that postural deformities have a multifactorial pathophysiology, including muscular rigidity, axial dystonia, weakness due to myopathy, body scheme defects due to centrally impaired proprioception, and structural changes in the spine. Antecollis in parkinsonian disorders refers to a forward flexion of the head and neck. It is usually mild in severity and may be considered part of the stooped posture in patients with PD. Some authors that suggest the term antecollis should only be used in patients with at least a minimum of 45 degrees of thoracolumbar flexion.
Neither camptocormia nor Pisa syndrome can be evaluated without taking into account the presence or absence of scoliosis. In this regard, the rotating component of the spine and its behavior in the supine position give important clues for a correct diagnosis. In some cases, X-rays in the standing and supine positions are necessary. The presence of marked camptocormia requires a minimum of flexion in the sagittal plane originating in the thoracolumbar spine greater than 45 degrees, with an almost complete resolution in the supine position. Pisa syndrome requires a minimum of 10 degrees of lateral flexion and is almost completely alleviated by passive mobilization or supine positioning. A certain degree of scoliosis is expected in most parkinsonian patients; therefore, both camptocormia and Pisa syndrome do not generally present as pure syndromes.

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Supporting Information

A video accompanying this article is available in the supporting information here.

Video S1. How do I examine postural disorders in Parkinson's disease?

[1]Movement Disorders Section, Neuroscience Department, Raul Carrea Institute for Neurological Research (FLENI), Buenos Aires, Argentina;
[2]Argentine National Scientific and Technological Research Council (CONICET), Buenos Aires, Argentina

***Correspondence to:** Dr. Marcelo Merello, MD, PhD, Movement Disorders Section and Neuroscience Department, Raul Carrea Institute for Neurological Research (FLENI), Montañeses 2325, Ciudad Autónoma de Buenos Aires (1428), Argentina; E-mail: mmerello@fleni.org.ar
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