Response to comments (Reviewer two):

The introduction should include more about the postural effects of levodopa and why you are doing the study:

The first stage of Parkinson's disease, lasting about 5 years, is mainly characterised by the presence of motor disorders, which are its axial symptoms (bradykinesia and resting tremor and/or muscle stiffness, and/or postural disturbances). In the later period, disabilities and so-called motor complications intensify in the form of shortening the proper response time to dopaminergic treatment (movement fluctuations) and involuntary movements in the form of dystonic dyskinesia (associated with lack of drug action) or chorea (associated with excessive drug activity). The therapeutic window is narrowed and the time of good motor functioning is shortened. Postural disorders are a major problem in Parkinson's disease. They may be an expression of the disease, but also an undesirable symptom of treatment. This was even reflected in diagnostic criteria. The specific response to the drug and the occurrence of fluctuations and dyskinesias associated with its use are considered to be typical symptoms of Parkinson's disease. Thanks to the L-dopa stimulation strategy, it is possible to shorten the off time, extend the on states and reduce the severity of symptoms in the off period, which reduces the severity/duration of chorea dyskinesia and minimises the symptoms of nocturnal disability. In connection with the above, the main therapeutic objective in Parkinson's disease is to improve mobility by optimising the elongation of the on period without intensifying dyskinesias and non-motor symptoms. Posture and gait-related disorders are one of the first changes signalling the disease. Therefore, in the first place, physiotherapeutic procedures should be aimed at improvement in this area. The gait is characterised by slow pace, small steps, narrowing of posture, shortening the distance between the foot and the ground, lack of co-movements of the upper limbs and trunk, and toddling while passing through an entrance. These symptoms predispose to the occurrence of falls, dangerous due to the risk of trauma and injuries, as a result of which the patient may lose his/her ability to move. In relation to the above, the aspect of studying postural stability in connection with L-dopa pharmacotherapy is very important. Early recognition of balance disturbances in combined with targeted physiotherapy can reduce the negative effects of insufficiency and thus, improve the efficiency of patients.

Did you do a UPDRS motor score before the testing:

Before carrying out the test on the Biodex Balance System platform, the Unified Parkinson's disease rating scale UPDRS was applied. The subjects suffered from advanced idiopathic
Parkinson's disease. They still responded well to L-dopa. The duration of the disease was longer than 5 years. The daily dose of L-dopa was within the range of 600-1,000 mg/d. The patients underwent postural stability testing before the morning dose and again, 1 hour after taking the 200 mg L-dopa dose (Madopar 250 cap).

There is a lot about freezing in both the intro and discussion but this is not something that you focused on at all during the study:

In the article, the phenomenon of "freezing" was used regarding the analysis of one of the clinical symptoms contributing to postural stability disorders. The clinical image of Parkinson's disease includes symptoms such as resting tremors, muscle stiffness, bradykinesia and postural stability disorders. Muscle stiffness is characterised by resistance when passively moving a limb. During the first phase of the disease, the patient can control it by changing limb position. Performing movements of one limb causes tremor in the opposite limb. Slowdown of movement is manifested, among others, by difficulties in beginning movement and sudden interruption of the already started movement. The above-mentioned symptoms have significant influence on the occurrence of postural stability disorders characterised by forward bend with trunk flexion. The silhouette is flexed, the knees, hips and elbows bent, the patient takes small steps, without taking his/her feet off the ground. In individuals diagnosed with Parkinson's disease, progressive failure of the neuromuscular system causes an increase in the thresholds of activity of sensory systems and an increase in uncontrolled muscle stimulation. The clinical image of these changes is dominated by increased tremors in the motor apparatus and increased muscle stiffness. As a result, conditions for postural stability control undergo change. In records regarding changes in the location of center of foot pressure on the surface among people with diagnosed Parkinson's disease, a characteristic increase in the amplitude of oscillation is observed. This inherently random motor stimulus can, in turn, produce disturbing signals at sensory inputs, causing further impairment of balance control. Due to impaired sensory modulation of the vestibular, proprioceptive and visual systems, the system of controlling balance, including many structures of the central nervous system, can be treated as a control system with three inputs, which on this basis, determines the spatial position of the body's center of gravity. The main task of the postural stability control system is to maintain optimum distance of the body's center of gravity from the stability limit. If full symmetry of the body is assumed, the center of gravity projection should fall exactly in the centre of the support surface.