DIAGNOSTIC ACCURACY OF PARKINSON'S DISEASE BY NEUROLOGISTS IN AN OUTPATIENT SETTING: THE PARKLINK BOLOGNA COHORT

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Introduction
The diagnosis of Parkinson's disease (PD) is still mainly clinical and with variable accuracy in different settings. The Parklink Bologna project is an ongoing record linkage system started in 2015 in the Local Health Trust of Bologna (LHTB), devised for epidemiological and research purposes, including prevalent and incident cases of PD or atypical parkinsonism.

Objective
The objective of this study is to evaluate the accuracy of the diagnosis of PD recorded by neurologists participating in the Parklink project. Interobserver agreement between two movement disorder experienced neurologists was assessed.

Methods
Diagnostic accuracy cross-sectional study on a random sample of 220 patients representative of the ParkLink cohort. Sensitivity, specificity, positive/negative predictive value (PPV/NPV) were calculated by assuming as reference standard the blinded diagnosis of two movement disorder experienced neurologists, applying Postuma international diagnostic criteria for PD, and as index-test the diagnosis recorded by outpatients neurologists within the ParkLink project. Interobserver agreement was assessed using Cohen's Kappa.

Results
In 193 patients (mean age 72.8 years) clinical documentation for a diagnosis was available. A sensitivity of 94.1% (95% CI: 88.7-97.4) and specificity of 63.2% (49.3-75.6), PPV of 85.9% (79.3-91.1) and NPV of 75% (59.7-86.8) were found for the first assessor. Interobserver agreement was "substantial" (Kappa 0.77, 95% CI: 0.67-0.87) between the two experts.

Conclusion
Diagnosis of PD according to the 2015 Postuma criteria showed good PPV and NPV in an outpatient real-world setting. It is possible to build reliable cohorts of people with PD for epidemiological research, based on both community neurologists and neurologists from movement disorder centres.