Title: Correlation of the data from a Parkinson's holter and a motor fluctuation diary, with UPDRS subscales: A sub-analysis of the MoMoPa-EC clinical trial

Carlos Pérez-López[1], Alejandro Rodríguez-Molinero[1], Jorge Hernández-Vara[2], Àngels Bayes-Rusiñol[3], Juan Carlos Martínez-Castrillo[4], David A Pérez-Martínez[5], on behalf of the MoMoPa-EC research group

[1]Consorci Sanitari de l'Alt Penedès i Garraf, Barcelona, Spain; [2] Hospital Universitari Vall d'Hebron and Neurodegenerative Diseases Research Group, Barcelona, Spain; [3]Hospital Quirón Teknon, Barcelona, Spain; [4]Hospital Ramón y Cajal, Madrid, Spain; [5]Hospital Universitario 12 de Octubre, Madrid, Spain

Background: The data from the new automatic detection systems for motor fluctuations (Parkinson's holter: STAT-ON®), agrees only moderately with the data from the patient diaries. This subanalysis of the MoMoPa-EC clinical trial examines the correlation of both measurement methods with subscales of the UPDRS, which is used as an external evaluation.
Methods: In total 71 patients with moderate-severe Parkinson's disease and at least two hours a day of Off were included. During the baseline study visit, UPDRS was administered to all patients by their neurologists. Between two and twelve weeks earlier, all patients completed a seven-day motor fluctuation diary and simultaneously wore the Parkinson's holter at home. The correlation (Spearman) of the holter and diary measurements (time on Off, On and with dyskinesias) was calculated, with UPDRS subscales: dyskinesias section of UPDRS-IV, UPDRS-III, and factor 1 of UPDRS-III (axial function, balance, and gait).
Results: The mean time in daily On(%), measured by the holter, correlated(ρ) 0.32 and 0.36 with the UPDRS III and with factor 1 of this scale, respectively. The same parameter measured by the diary correlated less with these subscales: 0.05 and 0.15. The mean daily Off time(%), measured by the sensor, correlated 0.21 with the UPDRS III and 0.29 with its factor 1. This correlation was less for the diary: 0.19 and 0.13. There was a higher correlation with the UPDRS-IV dyskinesias section and the diary (ρ:0.52) than with the sensor (ρ:0.45)
Conclusions: Both methods showed a low correlation with the UPDRS - the Hotler correlation being higher with the UPDRS-III, and the diary being higher with the UPDRS IV dyskinesias section. Both the UPDRS-IV and the diary are based on the patient's own report, which may explain the higher correlation.

This work is supported by AbbVie S.L.U, the Instituto de Salud Carlos III [DTS17/00195] and the European Fund for Regional Development, 'A way to make Europe'.

Biography

Alejandro Rodríguez-Molinero was graduated in medicine at the Universidad Autónoma de Madrid, in 2001. In 2006, he completed the specialisation in Geriatrics at the Hospital Central de la Cruz Roja in Madrid. In 2009 he was awarded the PhD degree in Preventive Medicine and Public Health at the Universidad Autónoma de Madrid, Spain. In 2010 he was appointed Adjunct Professor in Gerontechnology at the School of Engineering and Informatics, NUI Galway. Presently is the head of research department at the Consorci Sanitari del Garraf i l'Alt Penedès hospitals, in Cataluña, Spain.

Presenting author details
Full name: Alejandro Rodríguez-Molinero
Contact number: 607214125

Twitter account:
Linked In account:
Session name/ number:
Category: (Oral presentation/ Poster presentation): Oral presentation – It would be interesting to present this work and our previous submission in the same session, as they are closely related