



Characterising non-motor patterns of early morning off periods in Parkinson's disease: an international study.



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OBJECTIVE: To define and estimate prevalence of the non-motor clinical characteristics of early morning off periods in a consecutive series of PD patients across all stages.

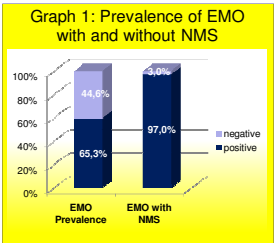
BACKGROUND:
Non-motor Fluctuations

- are common and disabling
- can be assessed by Wearing-off Questionnaire (WOQ) (Stacy et al., Mov Disord 2005)
- Main symptoms are dysautonomic, cognitive/psychiatric, or sensory/pain
- Frequent symptoms are anxiety (66%), drenching sweats (64%), slowness of thinking (58%), fatigue (56%), and akathisia (54%) (Witjas. et al., Neurology 2002)

Early morning off periods (EMO)

- are thought to be common in Parkinson's disease (PD) but the exact prevalence is unknown
- Clinical characteristics and non-motor associations have not been specifically studied
- Possibly motor and non-motor phenotypes can be identified by PD Sleep Scale (PDSS) 1 and 2 (Chaudhuri et al., JNNP 2002; Trenkwalder et al., Mov Disord 2011)

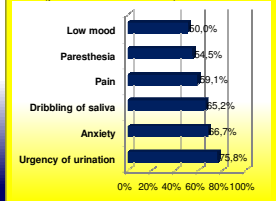
Demo-graphics	Mean/ No	Range/ %
Patients	101	
Males	71	70.3%
Females	30	29.7%
Age	67.2 yrs	42–87 yrs
Duration of Disease	7.6 yrs	0–24 yrs



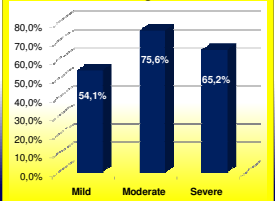
METHODS: In this ongoing European collaborative study

- PD patients satisfying UKPD brain bank criteria on dopaminergic treatment were identified
- EMO was evaluated by a structured questionnaire, including a UPDRS and a PDSS item
- EMOs with non-motor symptoms (NMS) were assessed by retrospective application of NMSQuest in those with EMO
- EMOs were classified to motor, mixed (motor + non motor) or non-motor EMOs
- Patterns of NMS with EMO were identified

Graph 2: Dominant NMS (present in > 50%) in EMO



Graph 3: Prevalence of EMO in different stages of PD



RESULTS:

- 101 patients with idiopathic PD have been assessed (table 1)
- EMO being present in 65.3% (63% of males, 70% of females) can be characterised by pure motor, mixed (motor and non-motor) and non-motor dominant phenotype (graph 1)
- 6 NMS are dominant (present in > 50%) in EMO (graph 2)
- EMO was similarly prevalent in mild (H&Y stages 1-2), moderate (H&Y 2.5-3), and in severe disease (H&Y 4-5)

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CONCLUSIONS: Early morning off periods are frequent across all stages of PD and are often associated with a number of non-motor symptoms. Recognition is important, as these NMS may be treatable e. g. by longer acting dopaminergic therapies.