

Freezing of gait in parkinsonism: is an early predictor of cortical dementia?

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Introduction:

Freezing of gait (FoG) is a severe gait disorder commonly attributed to Parkinson's disease (PD); however, an early occurrence of FOG is more likely attributable to atypical parkinsonisms. There are few published data on the frequency of FoG in Dementia with Lewy bodies (DLB).

Objective:

To examine whether FoG is an early feature of DLB.

We performed a case-control study with retrospective analysis of 19 DLB patients, matched with 19 PD (de novo pts) for gender, disease duration, age and motor phenotype at onset, UPDRSIII at first visit (T0, within two years after clinical onset). FoG presence and severity were assessed at T0 and follow-up yearly visits (T≠0) from the clinical charts of patients with a minimum follow-up of 5 years, based on history and clinical examination through the 14 item of UPDRSII and rated as FoG ≥ 1 and FoG ≥ 2. Patients differed significantly in MMSE ($p=0.000$). Groups were compared by using contingency tests (Fisher exact test) to analyze differences in the proportions of FoG.

Results:

At T0, 14 DLB patients (70%) and 2 PD patients (10%) had FoG ≥ 1 ($p=0.001$); FoG ≥ 2 was present in 5 DLB patients (25%) but in any of the PD patients ($p=0.001$). FoG showed a greater frequency and severity in DLB than PD also at the follow-up: at T5, 19 DLB patients (95%) and 9 PD patients (45%) had FoG ≥ 1 ($p=0.05$), while 12 DLB patients (60%) and 2 PD patients (10%) had FoG ≥ 2 ($p=0.05$) [Tab.1 and Fig.1].

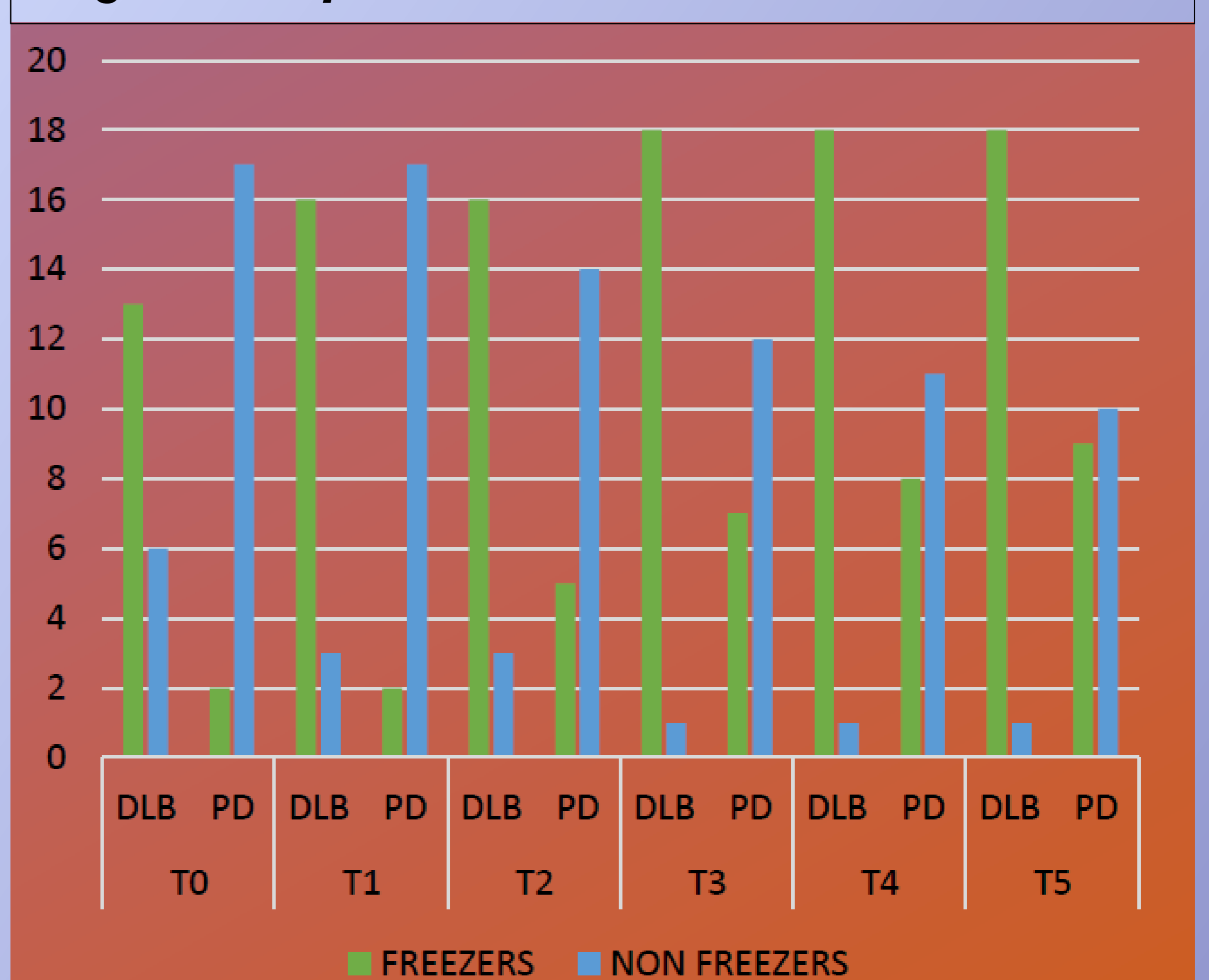
Conclusions:

This study confirms our preliminary data that an early appearance of FOG might be associated with DLB. Moreover, the greater and earlier prevalence of FoG in DLB with respect to PD sustain the interplay between FoG and cognitive impairment and strengthen the role of cortical regions in FoG pathogenesis.

Tab. 1: 5-years prevalence of FoG in DLB and PD patients

		FOG +	FOG -	%
T0	DLB	13	6	68%
	PD	2	17	10%
T1	DLB	16	3	84%
	PD	2	17	10%
T2	DLB	16	3	84%
	PD	5	14	26%
T3	DLB	18	1	95%
	PD	7	12	37%
T4	DLB	18	1	95%
	PD	8	11	42%
T5	DLB	18	1	95%
	PD	9	10	45%

Fig. 1: FoG prevalence in DLB vs PD



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