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Predicting first fall in newly diagnosed Parkinson's disease: Insights from a fall-naïve cohort

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We read with interest Lord et al.'s article 'Predicting first fall in newly diagnosed Parkinson's disease: Insights from a fall-naïve cohort',[1] which provides unique insights in fall-risk in fall-naïve mild to moderate Parkinson's disease (PD) patients and may provide a clinical tool for preventing falls in these patients. We noted that the authors found a three-year fall rate of 61% in this cohort. This is particularly interesting, as this rate is much lower than previously reported fall rates in PD (approximately 60% annual fall rate) [2, 3] and that in fact, it is comparable to that of older adults (> 65 years old) without PD (approximately 33% fall rate).[2, 4] Based on these previously reported PD and normal elderly annual fall rates, 3-year predicted fall rates can be as high as 94% and 70% for PD patients and normal older adults, respectively (Table 1).

Both predicted rates exceed the 3-year predicted fall rates in PD in this study. It is also noteworthy that Lord et al. excluded a group of 26 (22%) participants from their cohort because they reported at least one fall in the year prior to the start of the study, and thus were not fall-naïve. This shows that in the cohort of consecutively recruited patients with mild-to-moderate PD their one-year baseline fall rate of 22% is much lower than that reported in PD, and even somewhat lower than that reported in older adults (Table 1). Fall rates in PD may need to be reexamined as currently reported rates may be overestimates, especially in population with mild-to-moderate PD. Rates in this population may actually be comparable to that in older adults without PD. We suggest that it is only during later and more severe stages of Parkinson's disease that fall frequency significantly increases above of that of the normal elderly fall rate.

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Table 1

Fall rates in older adults (OA) and individuals with Parkinson's disease (PD).

Literature	1-Year Fall Rate		3-Year Fall Rate	
	OA	PD	OA	PD
Allan et al.[2]	33%	61%	70%[a]	94%[a]
Lord et al.[1]	N/A	33% [b]–45%[c]	N/A	61%

[a]Calculated from 1-year fall rate ($1Yr_{FR}$) [100*$1Yr_{FR}$ + $Y2_{NF}$*$1Yr_{FR}$ + $Y3_{NF}$*$1Yr_{FR}$; $Y2_{NF}$: number of non-fallers at start of year 2 (100–100*$1Yr_{FR}$); $Y3_{NF}$: number of non-fallers at start of year 3 ($Y2_{NF}$-$Y2_{NF}$*$1Yr_{FR}$)]

[b]Calculated from fall-naïve data (n = 77) if fall-naïve participants with recurrent falls in the 3-year period (n = 29) had two falls during this period [(18/3 + 29*2/3)/77*100 = 33%]

[c]Calculated from fall-naïve data (n = 77) if fall-naïve participants with recurrent falls in the 3-year period (n = 29) had at least three falls during this period [(18/3 + 29)/77*100 = 45%]