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Symptom Prevalence of Neurodegenerative Diseases among Minorities

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Abstract

Background: The annual number of neurodegenerative diseases among minorities is projected to increase by 524% between 1990 and 2040 in the US and there have been no studies looking at the incidence and prevalence of signs/symptoms among different racial and ethnic minority patients with Alzheimer's dementia (AD), Parkinson's disease (PD) and Motor neuron disease (MND).

Methods: Retrospective review of all minority subgroups who presented to Mayo Clinic, Rochester (MN), with a diagnosis of AD, PD or MND between January 1st, 2000 and December 31st, 2015. We divided our study population into seven groups: Black, Asian, South Asian, Middle Eastern, Hispanic/Latino, American Indian/Alaskan Native and Native Hawaiian/Pacifc Islander.

Results: From a total of 8927 patients diagnosed with a neurodegenerative disease at our institution over the 15 year time frame, 472 were minority [PD=220 (46.6%); AD=90 (19.1%) and MND=162 (34.3%)]. The most common races/ethnicity were Black or African American in 135 (28.6%), Asian in 101 (21.4%), South Asian in 69 (14.6%), Middle eastern in 60 (12.7%), Hispanic/Latino in 59 (12.5%) and American Indian/Alaskan Native/Native Hawaiian/Pacifc Islander in 48 (10.2%). For PD, there were differences in the frequency of micrographia, anosmia, levodopa induced dyskinesia, falls and dystonia, while for AD there were differences in executive dysfunction and visual spatial changes and for MND difference were present for muscle atrophy, limb fasciculation, inability to ambulate, tongue fasciculation, choking episodes and dysphagia.

Conclusion: Neurodegenerative diseases affict all minority races and ethnicities, including some not previously reported and the frequency of presenting signs and symptoms signifcantly vary across different minority/ethnic groups.

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A (A), (A), (-) 1992 2040, 42.3 96.6 (126%), 3.3 14.1 (327%) 1 . 524% 1990 2040, A 2 . 1992, A 3-9 . (/) / ( ) / / / (A , A).

/ / ( ), 1/1/2000 12/31/2015.

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3 (75%) [illegible] 1.

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56.7 [illegible] : 47.9-64) [illegible] 53.1 [illegible] 46.3-62.5). [illegible] 10 (43.5%) [illegible] 3 (17.7%) [illegible] 1.5 [illegible] 1-2.6) [illegible] 1.

[illegible] 158 (97.5%). [illegible] 84 (51.9%). [illegible] 3 [illegible] 3.

[illegible] (A [illegible] A [illegible]).

[illegible] A, [illegible]

([illegible]) 2025, 75% [illegible] 1.2 [illegible] 60 [illegible] 16,17 [illegible] (336%) [illegible] 235-393% [illegible] A [illegible] (100%) [illegible] 18 [illegible] A [illegible]

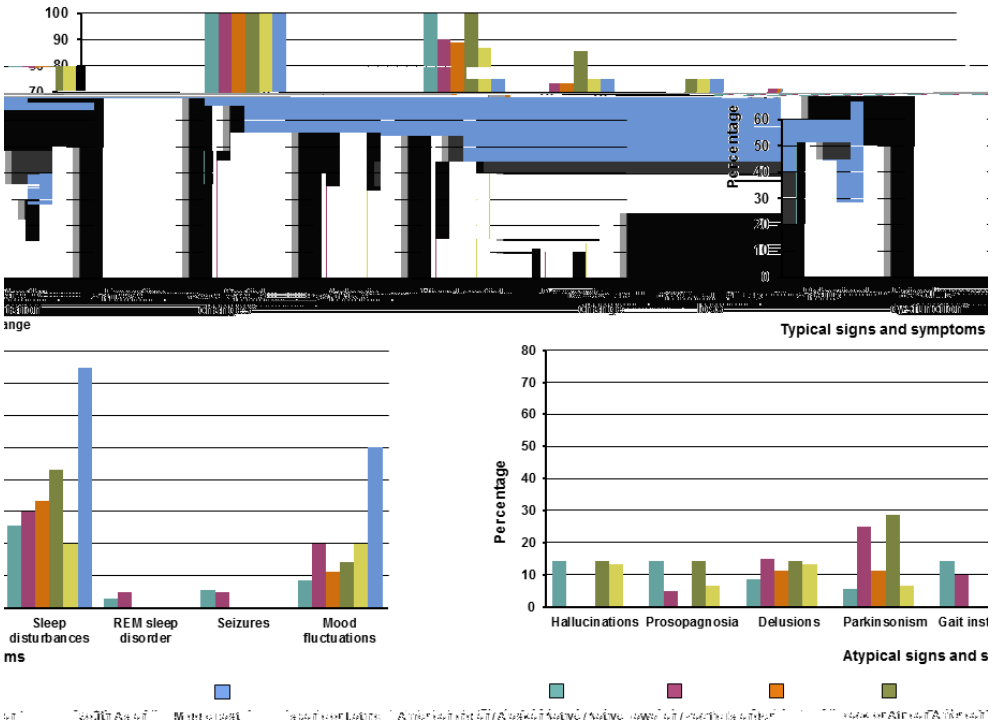

Figure 2: Prevalence of typical and atypical signs and symptoms among different races and ethnic groups in Alzheimer's disease.

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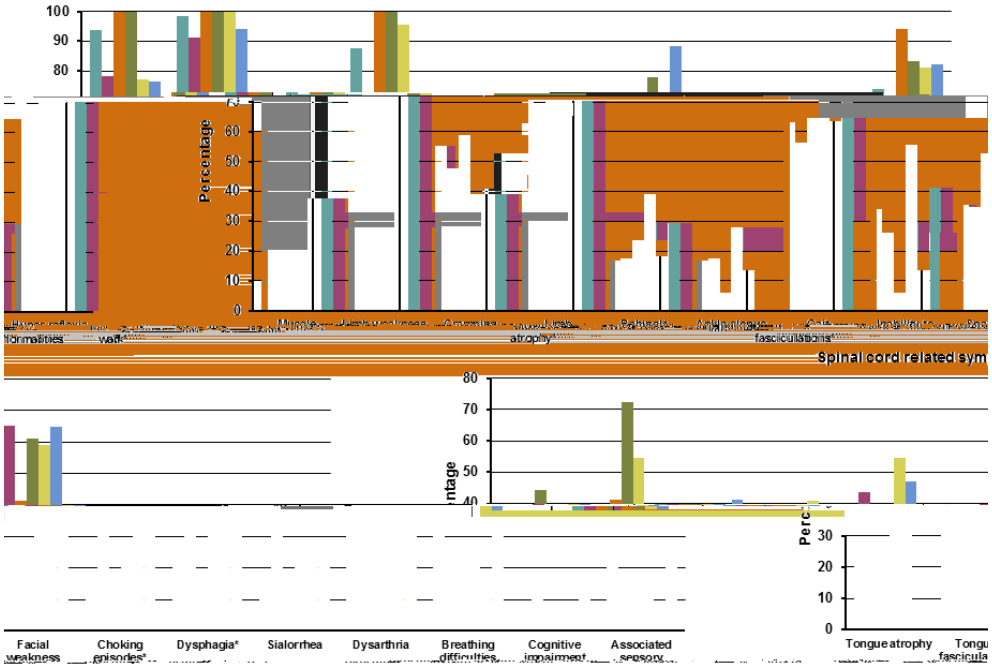

Figure 3: Prevalence of spinal cord related and bulbar signs and symptoms among different races and ethnic groups in Motor Neuron disease.

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