

Comorbidities and Dementia: A Clinical Profile from a Brazilian Public Health Setting

P2-13

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In a public health setting of a memory clinic in Brazil, the high prevalence of comorbidities highlights the importance of addressing modifiable risk factors for dementia prevention.

INTRODUCTION	RESULTS	RESULTS	CONCLUSIONS	REFERENCES																																																																																																																																																
Hypertension, hearing loss, and low education are key risk factors for dementia. Low educational attainment is a major risk factor, particularly in lower-income regions. Stroke, psychiatric disorders, alcoholism, and epilepsy are also associated with an increased risk. These risks are compounded by limited access to healthcare and education. Protective factors include job stability, higher income in old age, and ongoing intellectual activity, which are admittedly more prevalent in high-income populations. We aim to assess the prevalence and association of comorbidities with dementia severity in a Brazilian public health setting.	Table 1 presents the clinical and sociodemographic characteristics of the 62 patients. The mean age observed was 68.66 years (± 10.04), with a minimum of 44 and a maximum of 93 years. The population was equally divided between female and male (50% each, n=31). The predominant age group was 61 to 70 years (37.10%), followed by 71 to 80 years (27.42%). Regarding the time of symptom onset, the vast majority of patients reported that cognitive symptoms began more than 1 year prior to the first consultation with the specialist (96.77%). <table><caption>Table 1 – Sociodemographic and Clinical Characteristics of the Patients</caption><tr><th colspan="2">Population</th><th>n</th><th>%</th></tr><tr><td rowspan="3">Age (years) (n=62)</td><td>Mean ($\pm$ SD)</td><td colspan="2">68,66 ($\pm$ 10,04)</td></tr><tr><td>Min - Max</td><td colspan="2">44 - 93</td></tr><tr><td></td><td></td><td></td></tr><tr><td rowspan="5">Age range (n=62)</td><td>44 - 60 years</td><td>13</td><td>20,97</td></tr><tr><td>61 - 70 years</td><td>23</td><td>37,10</td></tr><tr><td>71 - 80 years</td><td>17</td><td>27,42</td></tr><tr><td>> 81 years</td><td>9</td><td>14,52</td></tr><tr><td></td><td></td><td></td></tr><tr><td rowspan="2">Gender (n=62)</td><td>Female</td><td>31</td><td>50,00</td></tr><tr><td>Male</td><td>31</td><td>50,00</td></tr><tr><td rowspan="5">Education level (n=62)</td><td>0 - 4 years</td><td>44</td><td>70,97</td></tr><tr><td>5 - 8 years</td><td>10</td><td>16,13</td></tr><tr><td>9 - 11 years</td><td>4</td><td>6,45</td></tr><tr><td>> 11 years</td><td>4</td><td>6,45</td></tr><tr><td></td><td></td><td></td></tr><tr><td colspan="2">Time from symptom onset to first consultation (n=62)</td><td></td><td></td></tr><tr><td colspan="2"></td><td>$\leq$ 1 year</td><td>3,23</td></tr><tr><td colspan="2"></td><td>> 1 year</td><td>96,77</td></tr><tr><td rowspan="3">CDR scale – quantitative (n=62)</td><td>Median (P25 - P75)</td><td colspan="2">1 (0,5 - 2)</td></tr><tr><td>Min - Max</td><td colspan="2">0,5 - 3</td></tr><tr><td></td><td></td><td></td></tr><tr><td rowspan="5">CDR scale – category (n=62)</td><td>0,5</td><td>17</td><td>27,42</td></tr><tr><td>1</td><td>20</td><td>32,26</td></tr><tr><td>2</td><td>19</td><td>30,65</td></tr><tr><td>3</td><td>6</td><td>9,68</td></tr><tr><td></td><td></td><td></td></tr><tr><td colspan="4">Abbreviations: n = absolute frequency; % = percentage; SD = standard deviation; Min = minimum; Max = maximum; P25 = 25th percentile; P75 = 75th percentile; CDR = Clinical Dementia Rating Scale.</td></tr></table>	Population		n	%	Age (years) (n=62)	Mean ($\pm$ SD)	68,66 ($\pm$ 10,04)		Min - Max	44 - 93					Age range (n=62)	44 - 60 years	13	20,97	61 - 70 years	23	37,10	71 - 80 years	17	27,42	> 81 years	9	14,52				Gender (n=62)	Female	31	50,00	Male	31	50,00	Education level (n=62)	0 - 4 years	44	70,97	5 - 8 years	10	16,13	9 - 11 years	4	6,45	> 11 years	4	6,45				Time from symptom onset to first consultation (n=62)						$\leq$ 1 year	3,23			> 1 year	96,77	CDR scale – quantitative (n=62)	Median (P25 - P75)	1 (0,5 - 2)		Min - Max	0,5 - 3					CDR scale – category (n=62)	0,5	17	27,42	1	20	32,26	2	19	30,65	3	6	9,68				Abbreviations: n = absolute frequency; % = percentage; SD = standard deviation; Min = minimum; Max = maximum; P25 = 25th percentile; P75 = 75th percentile; CDR = Clinical Dementia Rating Scale.				Among the patients, 37.7% had one comorbidity, 32.8% had two and 29.5% had three or more. The most frequent conditions were hypertension (61.3%), diabetes (27.4%), and depression (19.4%), followed by hypothyroidism, epilepsy and stroke, as shown in Table 2 and Figure 1. <table><caption>Table 2 – Prevalence of comorbidities</caption><tr><th></th><th>n</th><th>%</th></tr><tr><td rowspan="3">No. of Comorbidities</td><td>1</td><td>23</td></tr><tr><td>2</td><td>20</td></tr><tr><td>≥ 3</td><td>18</td></tr><tr><td>Hypertension</td><td>38</td><td>61.29</td></tr><tr><td>Diabetes mellitus</td><td>17</td><td>27.42</td></tr><tr><td>Depression</td><td>12</td><td>19.35</td></tr><tr><td>Hypothyroidism</td><td>11</td><td>17.74</td></tr><tr><td>Epilepsy</td><td>11</td><td>17.74</td></tr><tr><td>Stroke</td><td>10</td><td>16.13</td></tr><tr><td>Dyslipidemia</td><td>6</td><td>9.68</td></tr><tr><td>Alcohol</td><td>6</td><td>9.68</td></tr><tr><td>Neoplasm</td><td>5</td><td>8.06</td></tr><tr><td>Anxiety</td><td>4</td><td>6.45</td></tr><tr><td>Smoking</td><td>4</td><td>6.45</td></tr><tr><td>Parkinson's disease</td><td>3</td><td>4.84</td></tr><tr><td>Aneurysm</td><td>2</td><td>3.23</td></tr></table> ^a absolute frequency; % percentage		n	%	No. of Comorbidities	1	23	2	20	≥ 3	18	Hypertension	38	61.29	Diabetes mellitus	17	27.42	Depression	12	19.35	Hypothyroidism	11	17.74	Epilepsy	11	17.74	Stroke	10	16.13	Dyslipidemia	6	9.68	Alcohol	6	9.68	Neoplasm	5	8.06	Anxiety	4	6.45	Smoking	4	6.45	Parkinson's disease	3	4.84	Aneurysm	2	3.23	The study highlights a high prevalence of modifiable comorbidities among individuals with dementia from a Cognitive Neurology center in Brazil. Interestingly, hypothyroidism was also noted as a relevant comorbidity among patients with dementia in our sample. However, the overall evidence regarding the association between thyroid dysfunction and dementia remains inconclusive in recent large-scale analyses (Ma, Li-Yun, 2023). Furthermore, the high percentage of patients who gained access to their first consultation with a specialist only after more than a year from the onset of cognitive symptoms could indicate a possible relationship between diagnostic delay and the socioeconomic and educational status of the studied population. Managing modifiable risk factors is crucial to help reduce dementia risk and improve outcomes, especially in low-income, low-education populations, who are recognizably more vulnerable to comorbidities.	GONG, J. <i>et al.</i> Sex differences in dementia risk and risk factors: individual-participant data analysis using 21 cohorts across six continents from the COSMIC Consortium. <i>Alzheimer's & Dementia: The Journal of the Alzheimer's Association</i>, v. 19, n. 8, p. 3365–3378, 2023. DOI: 10.1002/alz.12962. HUQUE, H. <i>et al.</i> Could country-level factors explain sex differences in dementia incidence and prevalence? A systematic review and meta-analysis. <i>Journal of Alzheimer's Disease</i>, v. 91, n. 4, p. 1231–1241, 2023. DOI: 10.3233/JAD-220724. EMRANI, S.; SUNDERMANN, E. E. Sex/gender differences in the clinical trajectory of Alzheimer's disease: insights into diagnosis and cognitive reserve. <i>Frontiers in Neuroendocrinology</i>, v. 77, p. 101184, 2025. DOI: 10.1016/j.yfrne.2025.101184. BARTZ, D. <i>et al.</i> Clinical advances in sex- and gender-informed medicine to improve the health of all: a review. <i>JAMA Internal Medicine</i>, v. 180, n. 4, p. 574–583, 2020. DOI: 10.1001/jamainternmed.2019.7194. EASTMAN, J.; BAHORIK, A.; KORNBILTH, E.; XIA, F.; YAFFE, K. Sex differences in the risk of dementia in older veterans. <i>The Journals of Gerontology: Series A. Biological Sciences and Medical Sciences</i>, v. 77, n. 6, p. 1250–1253, 2022. DOI: 10.1093/gerona/iglac029. HASSELGREN, C. <i>et al.</i> Sex differences in dementia: on the potentially mediating effects of educational attainment and experiences of psychological distress. <i>BMC Psychiatry</i>, v. 20, n. 1, p. 434, 2020. DOI: 10.1186/s12888-020-02820-9. BLOOMBERG, M.; DUGRAVOT, A.; DUMURGIER, J. <i>et al.</i> Sex differences and the role of education in cognitive ageing: analysis of two UK-based prospective cohort studies. <i>The Lancet Public Health</i>, v. 6, n. 2, p. e106–e115, 2021. DOI: 10.1016/S2468-2667(20)30258-9. MA, LI-YUN <i>et al.</i> Association of thyroid disease with risks of dementia and cognitive impairment: A meta-analysis and systematic review. <i>Front. Aging Neurosci.</i>, Sec. Alzheimer's Disease and Related Dementias, Volume 15 - 2023 DOI: 10.3389/fnagi.2023.1137584
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