

Impact of COVID-19 pandemic in an early-onset dementia clinic in Barcelona

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Abstract

Background: The ongoing COVID-19 pandemic and related care policies have affected dementia patients. The characteristics of early-onset dementia (EOD, <65 years) patients in 2020 may provide insights on how to rearrange the provision of care.

Method: We retrospectively reviewed, from 2016 to 2020, the demographic and clinical data of the new referrals at our EOD clinic (Hospital Clínic Barcelona). We used Fisher's Exact test and Mann-Whitney U test in R4.0.2 (<http://www.R-project.org/>) to analyze differences between 2020 and the period 2016-2019.

Result: In 2020, we did not visit any new referral from 15th march to 31th may. We evaluated 104 patients in 2020 and 392 patients in 2016-2019 (mean=98(SD=11.8) patients/year). No differences were found in age at onset (AAO), sex, diagnostic delay and MMSE score (Table1). Significant differences were found in the diagnoses obtained in each period ($p < 0.000005$, Figure1A). In 2020, 19.2% of the patients were diagnosed with neurodegenerative diseases (ND), 48.1% with non-neurodegenerative diseases (NND) and 32.7% with subjective cognitive decline (SCD). On contrast, in 2016-2019, 26% of the patients were diagnosed with ND, 22.2% with NND and 51.8% with SCD. Compared to 2016-2019, ND, but not SCD or NND, presented longer diagnostic delay in 2020 ($p < 0.0005$, Figure1B). ND, NND and SCD did not show differences between periods in AAO, sex or MMSE.

We did not find differences in the type of ND in each period (Figure1A). Compared to 2016-2019, Frontotemporal Lobar Degeneration (FTLD) presented longer diagnostic delay in 2020 ($p < 0.005$, Figure1B) while ND subgroups did not show differences in AAO, sex or MMSE. Cognitive disturbances in recovered COVID-19 patients accounted for 16% of NND in 2020 [N=8, AAO 50.63(12), 63% female, MMSE 26.8(2.3)].

Conclusion: In 2020, albeit we were forced to stop our normal activity during 2.5 months, we visited a similar number of patients among which we observed an increase in NND, including cognitive disturbances in patients with recovered COVID-19. On

contrast, we found a reduction in SCD and, to a lesser extent, ND. ND showed a longer diagnostic delay in 2020 that mainly affected FTLD. Whether COVID-19 pandemic entails a diagnostic delay in dementia patients must be confirmed in 2021.

Figure 1. (A) Number of patients by diagnosis and year. (B) Diagnostic delay (mean) by diagnosis and year.

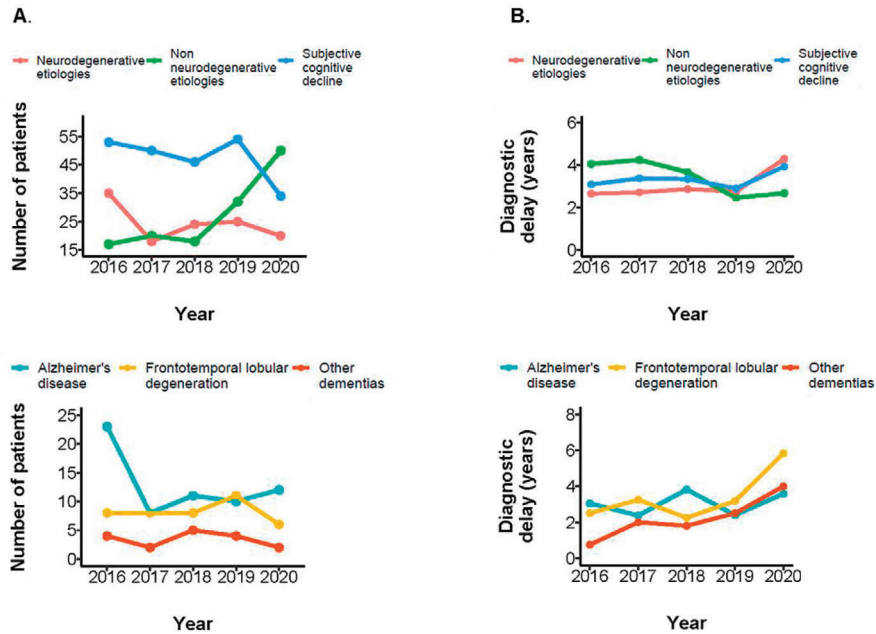


FIGURE 1

TABLE 1

Table 1. Frequencies, demographic and clinical data of the patients visited in 2020 and 2016-2019

	Period	Number patients/year	Relative frequency (%)	Age at onset (years)	Women (%)	Diagnostic delay (years)	MMSE
New referrals							
	2020	104	-	53.3(8.7)	58	3.4(3.6)	25.1(4.7)
	2016-2019	98(11.8)	-	52.94(8.76)	56.1	3.12(3.9)	24.45(5.8)
Neurodegenerative diseases							
	2020	20	19.2*	54.3(7.7)	60	4.3(2.1)*	20.4(5.8)
	2016-2019	25.5(7.1)	26*	57.3(5.9)	47.1	2.75(2.2)*	21.7(6.6)
Non-neurodegenerative diseases							
	2020	50	48.1*	54.1(7.8)	50	2.7(3.5)	25.9(3.5)
	2016-2019	21.8(7)	22.2*	52.1(10.3)	49.4	3.44(5)	25.02(4.6)
Subjective cognitive decline							
	2020	34	32.7*	51.6(10.2)	68	3.9(4.3)	27.2(1.7)
	2016-2019	50.8(3.6)	51.8*	51.1(8.5)	63.5	3.17(4)	28(3.9)
Neurodegenerative diseases							
Alzheimer's disease							
	2020	12	60	56.8(3.8)	83.3	3.6(1.2)	19.1(5.1)
	2016-2019	13(6.8)	51	58.6(4.3)	51.9	3(1.7)	19.9(6.2)
Frontotemporal lobular degeneration							
	2020	6	30	50.8(12)	33.3	5.8(1.6)*	20.4(6.8)
	2016-2019	8.8(1.5)	34.3	55.7(5.6)	45.7	2.8(2.6)*	23.5(6.8)
Other neurodegenerative dementias							
	2020	2	10	49.5(9.2)	0	4(5.7)	26.5(3.5)
	2016-2019	3.8(1.3)	14.7	56.3(10)	33.3	1.7(2.3)	22.7(2.3)

Means are presented as mean (standard deviation). *p values<0.005. p values were calculated using the Fisher's Exact Test or Mann-Whitney U test.