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A descriptive study of the population attending Nice Memory Clinic: the Cobtest database analysis

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Camille Paliniewicz. A descriptive study of the population attending Nice Memory Clinic: the Cobtest database analysis. Human health and pathology. 2022. dumas-03828637

HAL Id: dumas-03828637

<https://dumas.ccsd.cnrs.fr/dumas-03828637>

Submitted on 25 Oct 2022

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UNIVERSITE NICE SOPHIA ANTIPOLIS

FACULTE DE MEDECINE DE NICE



THESE D'EXERCICE EN MEDECINE

Par

Madame Camille PALINIEWICZ

Née le 06/08/1993 à Béthune

**Etude descriptive de la population consultant au Centre Mémoire de Nice : analyse de la base
de données COBTEST**

Présentée et soutenue publiquement le 11/10/2022 à Nice

Pour obtention du Diplôme d'Etat de Docteur en médecine

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Directeur de Thèse : Monsieur le Docteur Guillaume SACCO

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Remerciements

Aux membres du jury :

- Professeur Olivier Guérin

Pour avoir accepté de présider ce jury, pour votre enseignement et pour votre accueil et votre écoute

- Docteur Guillaume Sacco

Pour avoir accepté de diriger ce travail, pour ta patience et tes nombreux conseils

- Docteur Aurélie Mouton

Pour avoir accepté de juger ce travail, pour l'analyse que tu y as apporté et pour aide précieuse face à mes questions pendant mon stage

- Docteur Emeline Michel

Pour avoir accepté d'apporter ton expertise à ce travail et ton engagement dans notre enseignement

A toute l'équipe médicale de l'hôpital de Cimiez ; A Cyrielle et Marine mes premières « cheffes » de gériatrie à Cimiez, merci pour votre accueil, pour tout ce que vous m'avez appris et pour votre confiance grandissante au fur et à mesure du stage. A Jihene, pour ta bonne humeur, ta gentillesse et la confiance que tu as pour moi. A Déborah, pour ton écoute, tes conseils et ton enseignement qui me reste précieux. A toute l'équipe paramédicale, merci pour votre soutien et votre bonne humeur.

A l'équipe des Sources ; A Caroline, merci pour ton humanité, pour tout ce chocolat et ces thés, pour ton écoute et pour ta patience. Tu m'as beaucoup appris et je te remercie. A Williams, merci pour toutes les connaissances que tu as partagées avec moi, qu'elles soient médicales ou littéraires, et merci pour la confiance que tu m'as toujours accordée. A Sylvie, pour ton énergie et ta bonne humeur. A Anne-Marie pour tout ce que tu m'apporté et tout ce que tu m'as appris. A votre soutien sans faille dans les moments difficiles. A toute l'équipe soignante, pour vos conseils et votre aide précieuse.

A l'équipe du Centre Mémoire, merci pour votre accueil, votre bonne humeur constante et votre écoute. Merci pour tout ce que vous m'avez tous appris.

Au Docteur Anne Charpentier, merci de m'avoir fait découvrir et aimer la gériatrie. Je ne serais pas ici sans vous.

A mes parents ; je n'ai pas les mots pour vous remercier pour votre soutien, pour vos encouragements, pour la foi que vous avez en moi. J'espère être un jour à la hauteur de votre fierté et de votre amour. Merci. Je suis si fière d'être votre fille.

A mon frère ; je t'aime Clément, que la force soit toujours avec toi. A ma sœur, mon microbe. Je suis si fière de toi. 사랑해요

A Caroline, ma moitié de cerveau, ma colloc préférée. La liste des choses pour lesquelles je dois te remercier est plus longue que cette thèse. Je te souhaite tout le bonheur du monde, même si parfois, Caroline, tu crains.

A Thomas ; à notre amitié avec son début tellement improbable. A tous ces moments qu'on a partagés et qu'on partagera ensemble. Souviens-toi : science sans conscience n'est que ruine de l'âme. A FX, pour nos voyages, nos fous rires et pour les moments tristes aussi, merci de les avoir passés avec moi.

Aux copains ; A Julie, Yiannis, Norman, Florence, Gauthier, Madeline, Charles, Marine, Cécile. Merci pour tous ces moments passés à vos côtés, pour votre soutien et vos conseils. Merci pour votre amitié qui m'est précieuse. A nos prochaines vacances, hivernale ou estivale.

A mes cointernes de gériatrie ; A Pauline, Imene, Axelle, Damien, Serena, Maxime et les autres. Merci pour l'aide que vous êtes toujours prêt à m'apporter, et pour votre accompagnement dans l'aventure de l'internat !

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A descriptive study of the population attending Nice Memory Clinic: the Cobtest database analysis

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Running title: *A descriptive study of the population attending Nice Memory Clinic: the Cobtest database analysis.*

Abstract word count: 187; **Word count:** 1936; **Table count:** 2; **Figure count:** 3; **Appendix count:** 1; **Reference count:** 9

A descriptive study of the population attending Nice Memory Clinic: the Cobtest database analysis

Introduction: Understanding the progression of neurocognitive disorders in our population remain essential for current care in memory consultation. The main objective of this study was to describe the evolution of cognitive decline in patient attending in a memory clinic.

Method: A 7 years longitudinal retrospective and monocentric study was conducted using the neuropsychological assessment software developed in the memory clinic of Nice university hospital. Patients with Alzheimer's disease (AD), vascular encephalopathy (VE, related with microvascular etiology and excluding stroke sequelae) or mixed neurocognitive disorder (Mx) and at least two neuropsychological assessment were included in the subgroup analyzes.

Results: data from 7033 patients, 61.8% of female, mean age 73.6 ± 13 years old were available in the period. The mean at first consult was 22 for the mini mental state examination (MMSE) and 13/18 for the Frontal Assessment Battery. 29.2% of our patients were diagnosed with a major neurocognitive disorder (NCD). 791 patients were included in the subgroup analyses. Among them, the mean cognitive decline was around 1.5 points loss for the MMSE. There seemed to be a steeper annual cognitive decline when Alzheimer's disease was involved in the pathological process (-2.0 ± 2.0 VS -0.7 ± 1.8 VS -1.6 ± 2.1 respectively for AD, VE and Mi). An early diagnosis at a minor stage of neurocognitive disorder, with higher initial MMSE score and an isolated vascular encephalopathy seemed associated with a slower cognitive decline.

Conclusions: etiological diagnosis and early entrance in care pathway seemed closely related with cognitive evolution. This study seems to identify a possible slower decline in a subgroup of patient with isolated microvascular encephalopathy. Further researches were necessary to confirm this finding.

Keywords: neurocognitive disorder, cognitive decline, elderly, Alzheimer disease, vascular disease

Introduction

Major neurocognitive disorders (NCD) are the seventh leading cause of death and one of the major cause of disability and dependency among older adults worldwide (1). In France, the reported number of people diagnosed with major NCD is estimated around 1.2 million with Alzheimer's disease (AD) responsible for two third of the cases (2). Major NCD are both underdiagnosed and untreated when symptomatic treatment is possible (3). Today, the diagnosis remains often lately established when preventive action and treatment plan are less effective. The delay leads to a massive financial and psychological impact on the patients and their family (4). Both are often eager to have clear answers as to how the cognitive and functional decline will evolve. Answering this question is made difficult by the heterogeneity of cognitive declines (5) found in even one country. To expand our knowledge of the disease we rely on epidemiological tools, such as La Banque Nationale Alzheimer, an organization dedicated to systematic data collection of patients attending French memory Clinic. However, those tools tend to be underexploited and/or in need of improvement (6). A few initiatives have been launched, among them a prospective study in the city of Lyon (France) (7) and a proposal to pool together the data collected by a number of French Memory Clinics with a view to identify and study different cognitive profiles.

Our aim was to describe the characteristic of the patients attending Nice Memory Clinic with a focus on the evolution of disorder related impairment in patients with AD, vascular encephalopathy (VE) and mixed (Mx) NCD. We tried to identify factors that influences the speed of cognitive decline.

Materials and methods

Design and setting

This retrospective study analyzed data from outpatients consulting in the memory clinic of the university hospital of Nice between 2014 and 2021. The data collection was performed through the homemade neuropsychological assessment software (CoBTest) in accordance with the 74th article of the Public Health Code and the law of 1978 concerning digital data and liberty protection. The database was registered by the CIL (liberty and informatics correspondent) on June 26th 2014 under the number 198.

Participants

The population studied was the patients attending the Nice Memory Clinic. Its main activity was the

diagnosis and management of patient with NCD. The patients were usually referred to the Memory Clinic by a general practitioner or a medical specialist. The clinic also had a research and resources purpose. Physicians and neuropsychologists could be solicited to offer their expertise on the diagnosis or management of patients by medical specialists, who might refer them for a specific inquiry. As a result, some patients only consulted once or came for specialized care that might not include a cognitive assessment, which had an impact on the number of entries in our database and should be taken into account.

Inclusion criteria was: at least one cognitive assessment using the Cobtest software coupled with a least one first level diagnosis (i.e. subjective memory complaint (SMC), minor or major NCD according to the DSM-V diagnosis criteria (8)) as entered into The Dossier Mobile Alzheimer (local record of the national Alzheimer database). Patients were informed of data collection and could object if they wished to (non-inclusion criteria).

Data collected

The CoBTest software was a computerized tool allowing its user to enter patient information's, clinical notes, to access a number of tests and evaluation scales in order to assess cognitive and functional states in real time. The consultations consisted of either a medical examination and/or standardized neuropsychological assessment to evaluate cognitive performance and functional autonomy. The interval between each consult as well as the number of consultations per year were determined by the physician in charge of the patient and thus might vary from one patient to another.

The data collected concerned sociodemographic characteristics of patients (age, gender, years of schooling or last diploma), neuropsychological assessment (including initial and last known Mini Mental Examination score (MMSE) (9) and Frontal Assessment Battery score (FAB) (10)) and the most recent known functional (SMC, minor or major NCD) and etiological diagnosis (AD, VE excluding stroke after-effect, Mx) according to the DSM-V criteria. The total number of consultations and the follow-up duration were also reported for each patient.

We excluded patients according to their number of evaluation (<2) or aberrant data as reported in the Flow chart (Figure 1).

Statistical analyses

Data were reported on Excel®. Categorical variables were described using absolute frequencies and

percentages. Quantitative variables were described using means and standard deviations as appropriate.

Initially, the characteristics of the patients and the scores at the first consultation were described across the whole population and based on diagnosis. Categorical data were compared using Chi2 and quantitative variable were compared using ANOVA test.

To estimate the speed of cognitive decline, we excluded patients who had less than two MMSE test scores reported into our database. Progression score was calculated by subtracting the test score results between first and last tests for each patient. Univariate analyses were performed according to these two groups. Categorical data were compared using Chi2 test as appropriate. Quantitative data were compared using the Student t test as appropriate. To test the MMSE evolution between the 3 diagnosis groups, the progression MMSE score (first MMSE-last MMSE) and the number of points lost per year ((first MMSE-last MMSE)/ time between first and last MMSE) were compared using ANOVA test and Tukey's Post-hoc. We defined the "slow cognitive decline" group as the population whose decline was slower than the mean MMSE loss and "fast" group as those whose rate was faster compared to our mean loss. Aberrant data were excluded based on boxplots, which lead to the exclusion of data inferior or superior to quartiles Q1 or Q3 more or less the standard deviation between the two quartiles. Each statistic test used an alpha risk of 5%. All statistical analyses were performed with R 4.0.1 software.

Results

There were 7033 patients entered into our database. 61.8% of those patients were women and the mean age of the population at first consult was 73.6 (± 13.0) years old. The mean MMSE score first entered into our database was 22.3 (± 6.4) and the mean FAB score was 13.0 (± 3.7). The majority of our patients (29.7%) had a high level of education (beyond baccalaureate). Our most reported diagnosis was major NCD (29.2%), followed by minor NCD (27.0%) and SMC (10.8%) (Table 1).

Patients had an average of 1.8 ± 1.4 consultations spaced 0.7 ± 1.5 years apart (eight month). If we excluded patients who came only once (representing 4324 patients), the mean follow-up was 1.8 ± 1.9 years.

Out of the 791 patients studied for the estimation of cognitive speed decline, 46.3% were diagnosed with AD, 28.5% with VE and 25.3% with Mx NCD. That population was largely female (54.6%), and had an age at first consult of 77.0 ± 7.9 years old. 34.2% of our patients had a low level of education and 25.4% stopped attending school after 8 years. The vast majority (72.7%) had a major NCD and a quarter

a minor one (25.4%). The complete characteristics of the population was reported in Table 1.

The mean difference between first and last MMSE was 3.6 ± 4.8 points for the whole population with a yearly decline of 1.5 ± 2.1 points. For AD patients, the mean difference was 4.5 ± 5.0 points with a yearly decline of 2.0 ± 2.0 points, whereas VE patients had a mean difference of 1.5 ± 3.6 points with a yearly loss of $0.7 (\pm 1.8)$ and Mx patients had a mean difference of 4.1 ± 4.8 points and a yearly decline of 1.6 ± 2.1 points. There was a significant difference for both parameters between AD, VE and Mx NCD (Table 1 and Figure 2).

When searching for factors influencing the speed of cognitive decline, we find a difference in initial MMSE, functional status and etiological diagnoses. The patients with the slower cognitive decline had a higher initial MMSE and were predominantly diagnosed with VE NCD. Both groups (slow and fast cognitive decline) had a majority of major NCD but minor NCD was overrepresented in the slower decline group. Age, gender or level of education had no influence on the speed of cognitive decline in our study (Table 2).

Discussion

Understanding and managing major neurocognitive disorder is a crucial 21st century's public health stake, and studying patients' characteristics is one way of expanding our knowledge of the disorder.

Our aim was to describe the characteristics of the population attending the Nice Memory Clinic. We also attempted to estimate a speed of cognitive decline through the number of points lost between first and last MMSE tests, with a particular focus on the factors influencing cognitive speed decline.

There were 7033 patients included in our database, mostly women, which was expected given that female gender is a risk factor for major neurocognitive disorder (11) (12) (13). It is generally agreed upon that the increased prevalence of major neurocognitive disorder is due to the greater life span of women relative to men. The mean age at first consultation, which will be approximated as the mean age of diagnosis, was 73.6 years old, in range or slightly younger than what is usually found in the literature (14) (15) (16). The minor discrepancy in age might be due to the specific referral of patients with early onset NCD to our research memory center. It might also be explained by the public health campaigns raising awareness about major NCD and encouraging people to seek a professional assessment when in doubt about memory loss, which might lead younger people to attend to a Memory Clinic (17). Most of the patients registered into our database had a high level of education, as defined by years of schooling superior to 13 years, which is discordant with the globally accepted hypothesis that a lower

level of education is a risk factor for the development of major neurocognitive disorder (18) (19) (20). The discrepancy might also be linked to our Memory Clinic being a research center. People with a higher socioeconomic level might have an easier access to specialized medical resources. They might also be more likely to be sensitive to the early memory loss symptoms. In accordance to the literature, a significant portion of the population studied had a low level of education (as defined as 5 years of schooling). A quarter of our patients at diagnosis had a disorder impacting at least one of the items of the Lawton Instrumental Activities of Daily Living scale simplified to 4 items in our consultations (management of treatment, use of public transport or personal vehicle, use of a phone, management of taxes and budget). What this finding, which is concordant with the literature (21), underlines is how difficult diagnosing major NCD in early stage is, especially since the first symptoms are non-specific and easily attributed to another disorder or mistaken as the physiological signs of ageing by the general public (22) (23) (24). However, an early diagnosis is all the more important since symptomatic treatment and preventive action are more effective in the first stages of the disease. An emphasis on education of primary care physicians and the general population is needed to remedy this situation. The MMSE and the FAB were the two tests chosen to estimate the cognitive function of our patients because on one hand, they were the most reported tests we had, and on the other hand because they both have a significant clinical meaning, in global cognitive state for the MMSE and executive functions for the FAB. The first MMSE registered in the database was 22.3/30, marginally superior to what is described in the literature (25) (26) (27). The studied population also had a somewhat higher Frontal Assessment Battery than what is usually found in the literature (28) (29) (30) (31) even when the population seemed fairly similar. It might be explained by the outpatient nature of our consultations which demands a preserved level of executive and cognitive functions (e. g. to plan how and when to attend the consult). The population attending the Nice Memory Clinic is thus moderately comparable to the population described in the literature studying major NCD. The main discrepancies might be explained by the specific research purpose of our clinic and its implications in terms of patient referral.

We also aimed to study major NCD impairment evolution in our patients and estimate a speed of cognitive decline. We decided to focus on three groups of patients attending our center (AD, VE and Mx NCD) (32), and represented 931 patients out of the 7035 into our database. We then excluded people with aberrant data in point loss which left us with a population of 791 patients. In comparison of the three groups, Mx NCD patients (mostly associating AD and VE disorder) were older and had both lower MMSE

and FAB. The age difference between groups is coherent with what has been reported in the literature (3). There was a higher number of women in all groups, expected since female gender is a known risk factor, except for the VE patients who were predominantly male. The difference might be explained by the higher prevalence of cardiovascular risk factors in men (33). A majority of patients in all group had a low level of education (as defined as 5 years of schooling), which was also expected given the data reported in the current literature (34). In both AD and Mx NCD group, the patients had a functional diagnosis of major NCD. In VE patients, the functional diagnosis was minor MCD. This is coherent with our finding which showed a slower cognitive decline in VE NCD group.

There was a significant difference in total and yearly number of points lost between AD, VE and Mx patients. All of this seems to indicate a steeper decline in cognitive function when AD is present compared to VE disorder alone.

While the yearly MMSE loss of points is fairly consistent with what can be found in the literature (35) (36) in relation with AD, the loss in VE patients largely varies depending on the studies. Some studies reported a lower point loss (37), some a number concordant with ours (38) and some a higher number of MMSE score point loss (36). Concerning the point loss in patients with Mx NCD, most of the literature showed a somewhat lower number compared to ours (39) (40) (41) (42) although one study found a greater point loss (43).

The statistically significant difference between some groups our study showed is not in concordance with what is known about the disorders. The literature shows that there is no difference in cognitive decline between AD and vascular major NCD (36) (44). There are also a number of studies reporting a more severe cognitive decline in Mx NCD compared with AD alone (45) (46) (47). One explanation might be the exclusion of stroke after-effect NCD with a sole focus on vascular encephalopathy-related neurocognitive disorder. The cognitive and functional decline may vary depending on the localization or the severity of the stroke. This leads to a different evolution in cognitive abilities compared to vascular encephalopathy lesions alone (48).

Since the neurodegenerative part of the disorder seems to be the one accelerating the cognitive decline, it is one more argument in favor of furthering the etiological diagnosis. This might be done by screening for the amyloid biomarker with either a lumbar puncture, an amyloid PET scan or soon a blood sample. Three factors seemed to influence cognitive speed decline in our population: the initial MMSE, the functional status and etiological diagnoses. In literature, age is associated with a faster decline (49) (50)

but, as previously discussed, our patients are slightly younger which might have an influence on our findings. There were very few studies that showed gender to impact cognitive speed decline (50) (51) (52), and those that show an effect of the level education are even rarer (53) (49) (50). Better performance at baseline neuropsychological tests was associated with a slower decline both in our study and the literature (54) (55) (56). Each of our groups consisted of a high number of major NCD patients but the slow decline group had an increased minor NCD diagnoses in accordance to what is known of the cognitive function progression. (57) (35). That patients diagnosed with a minor NCD at first consultation seemed to evolve more slowly is a strong argument to encourage patients to consult and be assessed as early in disease stage as possible.

Most studies show a faster cognitive decline in patients with mixed neurocognitive disorder (58) (59). As previously discussed, this discordance with our finding might be due to our focus on vascular encephalopathy and our exclusion of cerebral infarction which have a major impact on cognitive performance (60). This finding should obviously be further studied to test our hypothesis.

The majority of VE in the slow progression group might also be linked with the modifiable and treatable factors involved in the disease (61).

Our study's strengths include our large sample of patients which was sometimes more than twice what could be found in the literature concerning cognitive decline (25) (26) (27).

The diagnosis we used were based on either the DSM-IV or the DSM-V criteria, and we reclassified the DSM-IV diagnosis according to the DSM-IV nomenclature to harmonize our data. The DSM-V was published in 2013 but the Dossier Mobile Alzheimer based its diagnosis on the previous version until 2018 which led us to recategorize obsolete diagnosis with their closest equivalent in the DSM-V nomenclature.

Our study has several limitations, most of them linked to its retrospective nature. There were very little means to verify the accuracy of diagnosis entered into our database. However, since the physicians (either a neurologist, a psychiatrist or a geriatric doctor) diagnosing the patient were part of a memory reference center, they could be trusted to be as accurate as can be with a clinical diagnosis.

Data were analyzed retrospectively and thus without any way of standardizing the dataset entered into the database for each consult, although a large part of what we collected was fairly standard (e. g. age, gender, level of education...). As is usually the case with retrospective study, there were a number of missing data, mostly dealing with level of education and diagnosis. Another limit of our study was the

low number of years of attendance to Memory Clinic. The mean number of consultations was 1.8 with 0.7 mean years between first and last consult. For the patients who attended at least twice, the mean years between first and last consult was 1.8. This finding shows that for a large majority of the patients attending Nice Memory Clinic we have a limited hindsight as to the evolution of the disorder diagnosed. As to why most of our patients attended a limited number of consultations, it might depend on the initial evaluation result. There were also at least 10.8% of our population who had no significant alteration of their neuropsychological tests score and who might have felt a follow-up was unnecessary. There might also have been a number of patients who had a too altered neuropsychological test score at first consult and for whom repeated neuropsychological evaluations were not recommended. It should also be underlined that some of our patients were referred by their usual physicians for an expert opinion and thus were only seen once. The Memory Clinic also play a big part in specific management of major NCD which did not require multiple neuropsychological assessments or medical examinations and so might not be reported into our database.

Conclusions

Our study found that in the population attending Nice Memory Clinic, the diagnosis was predominantly a major NCD with a mean MMSE of 22/30. Yearly MMSE decline was 2 points for AD, 0.7 for VE and 1.6 points for Mx NCD patients. Our findings emphasized how crucial improving the quality of systematic data collected during Memory Clinics consultations is (62). The French initiative of creating a national memory observatory might enhance the data collected and help better understand cognitive decline and its impacts on our patients.

Acknowledgments

The authors would like to thank all the people belonging to the Nice Memory Clinic for their hard work to improve the life and care of our patients.

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Table 1. Baseline characteristics of the whole population (N=7033) and of patients diagnosed with Alzheimer's disease, vascular and mixed neurocognitive disorders (n = 791)

General characteristics	Whole population N=7033	AD+VD+ MD (N=791)			p-value
		AD (n=366)	VD (n=225)	MD (n=200)	
Age, mean \pm SD	73.6 \pm 13.0	76.2 \pm 8.1	76.0 \pm 8.2	79.8 \pm 6.4	<0.001**
Female gender, n (%)	4345 (61.8)	214 (58.5)	106 (47.1)	112 (56.0)	0.024**
MMSE score, mean \pm SD	22.3 \pm 6.4	19.7 \pm 5.9	23.8 \pm 4.6	19.0 \pm 5.1	<.001**
FAB score, mean \pm SD	13.0 \pm 3.7	11.7 \pm 3.6	13.0 \pm 3.2	10.8 \pm 3.2	<0.001**
Level of education, n (%)					0.044**
None	151 (3.1)	1 (0.6)	3 (2.4)	4 (4.7)	
Lower level	1078 (22.4)	41 (22.7)	38 (29.9)	21 (24.4)	
Upper level	962 (20)	30 (16.6)	24 (18.9)	15 (17.4)	
Primary education	1195 (24.8)	60 (33.2)	32 (25.2)	35 (40.7)	
Higher education	1430 (29.7)	49 (27.1)	30 (23.6)	11 (12.8)	
Missing data	2217	185	98	114	
Functional diagnosis, n (%)					<0.001**
Other	268 (3.8)	2 (0.6)	0 (0)	0 (0)	
SMC	758 (10.8)	2 (0.6)	12 (5.3)	1 (0.5)	
mNCD	1900 (27.0)	59 (16.1)	122 (54.2)	18 (9.0)	
MNCD	2055 (29.2)	303 (82.8)	91 (40.4)	181 (90.5)	
MMSE point loss, mean \pm SD					
Total, mean \pm SD		3.6 \pm 4.8			
		4.5 \pm 5.0	1.5 \pm 3.6	4.1 \pm 4.8	< .001**
Annual, mean \pm SD		1.5 \pm 2.1			
		2.0 \pm 2.0	0.7 \pm 1.8	1.6 \pm 2.1	< .001**

Notes: AD stands for Alzheimer disease, VD for vascular neurocognitive disorder and MD for mixed neurocognitive disorder. The MMSE and FAB scores were those reported at first consult. Functional diagnoses were as follow: other case, subjective memory complaint, minor neurocognitive disorder and major neurocognitive disorder:

Table 2. Comparison of the population diagnosed with Alzheimer's disease, vascular and mixed neurocognitive disorders (n=791) according to cognitive speed decline

Annual MMSE point loss			
	< 1.5 (n=424)	>= 1.5 (n=367)	
General characteristics			<i>p</i> -value
Age, mean ± SD	77.0 ± 7.8	77.1 ± 8.0	0.997
MMSE score, mean ± SD	21.1 ± 5.8	20.2 ± 5.6	0.016**
Female gender, n (%)	228 (53.8)	204 (55.6)	0.610
Level of education, n (%)			0.962
None / primary	75 (34.1)	60 (34.5)	
Lower level	54 (24.6)	46 (26.4)	
Upper level	39 (17.7)	30 (17.2)	
Higher education	52 (23.6)	38 (21.8)	
Functional diagnosis, n (%)			<0.001**
Other	1 (0.2)	1 (0.3)	
SMC	10 (2.4)	5 (1.4)	
mNCD	143 (33.7)	56 (15.3)	
MNCD	270 (63.7)	305 (83.1)	
Etiological diagnosis, n (%)			<0.001**
AD	158 (37.3)	208 (56.7)	
VD	162 (38.2)	63 (17.2)	
MD	104 (24.5)	96 (26.2)	

Notes: AD stands for Alzheimer disease, VD for vascular neurocognitive disorder and MD for mixed neurocognitive disorder. The MMSE and FAB scores were those reported at first consult. Functional diagnoses were as follow: other case, subjective memory complaint, minor neurocognitive disorder and major neurocognitive disorder

Figures

Figure 1. Flow chart

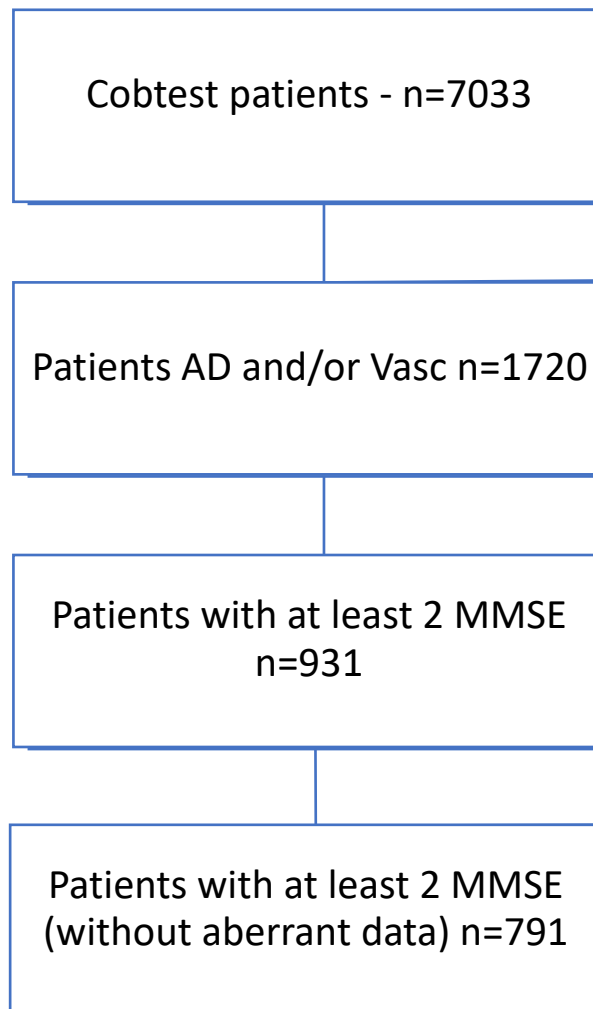
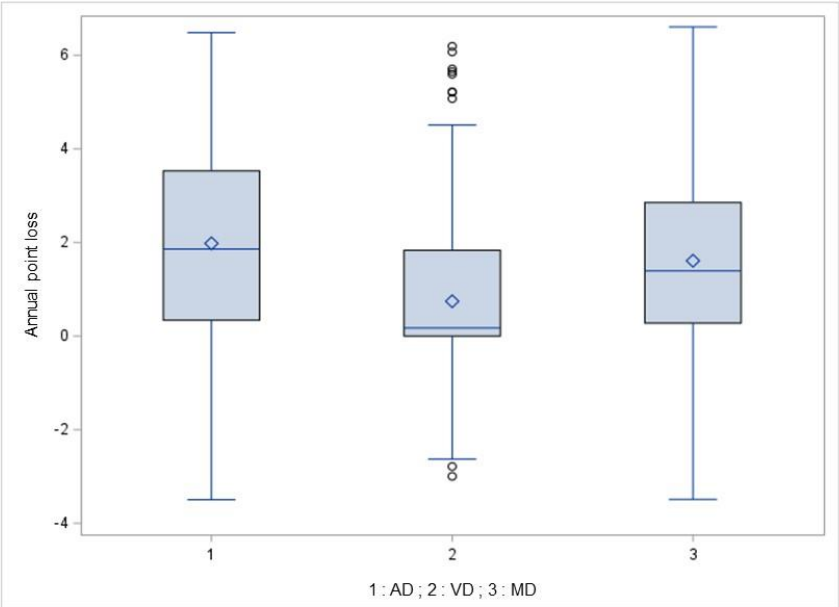


Figure 2. Annual MMSE test score point loss of patients with Alzheimer’s disease, vascular and mixed neurocognitive disorder



Ethics approval and consent to participate

Not applicable.

Availability of data and materials

There are no linked research data sets for this paper.

Competing interests

All authors state that they have no conflicts of interest with this paper. The authors have no relevant personal financial interest in this manuscript.

Funding

Not applicable.

Authors contributions

- Camille PALINIEWICZ has full access to all of the data in the study, takes responsibility for the data, the analyses and interpretation and has the right to publish any and all data, separate and apart from the attitudes of the sponsors. All authors have read and approved the manuscript.
- Study concept and design: Guillaume SACCO, MD, PhD
- Acquisition of data: Alexandre DERREUMAUX, MSc
- Analysis and interpretation of data: Roxane FABRE, MSc; Camille PALINIEWICZ; SACCO Guillaume, MD, PhD
- Drafting of the manuscript: Camille PALINIEWICZ; Roxane FABRE, MSc; SACCO Guillaume, MD, PhD
- Critical revision of the manuscript for important intellectual content: SACCO Guillaume, MD, PhD
- Obtained funding: Not applicable
- Statistical expertise: Roxane FABRE, MSc
- Administrative, technical, or material support: SACCO Guillaume, MD, PhD
- Study supervision: SACCO Guillaume, MD, PhD

Serment d'Hippocrate

« Au moment d'être admise à exercer la médecine, je promets et je jure d'être fidèle aux lois de l'honneur et de la probité.

Mon premier souci sera de rétablir, de préserver ou de promouvoir la santé dans tous ses éléments, physiques et mentaux, individuels et sociaux.

Je respecterai toutes les personnes, leur autonomie et leur volonté, sans aucune discrimination selon leur état ou leurs convictions. J'interviendrai pour les protéger si elles sont affaiblies, vulnérables ou menacées dans leur intégrité ou leur dignité. Même sous la contrainte, je ne ferai pas usage de mes connaissances contre les lois de l'humanité.

J'informerai les patients des décisions envisagées, de leurs raisons et de leurs conséquences. Je ne tromperai jamais leur confiance et n'exploiterai pas le pouvoir hérité des circonstances pour forcer les consciences.

Je donnerai mes soins à l'indigent et à quiconque me le demandera. Je ne me laisserai pas influencer par la soif du gain ou la recherche de la gloire.

Admise dans l'intimité des personnes, je tairai les secrets qui me seront confiés. Reçue à l'intérieur des maisons, je respecterai les secrets des foyers et ma conduite ne servira pas à corrompre les mœurs.

Je ferai tout pour soulager les souffrances. Je ne prolongerai pas abusivement les agonies. Je ne provoquerai jamais la mort délibérément.

Je préserverai l'indépendance nécessaire à l'accomplissement de ma mission. Je n'entreprendrai rien qui dépasse mes compétences. Je les entretiendrai et les perfectionnerai pour assurer au mieux les services qui me seront demandés.

J'apporterai mon aide à mes confrères ainsi qu'à leurs familles dans l'adversité.

Que les hommes et mes confrères m'accordent leur estime si je suis fidèle à mes promesses ; que je sois déshonorée et méprisée si j'y manque. »

Résumé

Introduction: Comprendre la progression des troubles cognitifs chez nos patients reste essentiel pour la prise en charge lors des consultations dédiées à la mémoire. L'objectif principal de cette étude était de décrire l'évolution du déclin cognitif chez patients consultant un Centre Mémoire.

Méthode: Etude longitudinale rétrospective monocentrique sur une période de 7 ans utilisant le programme d'évaluation neuropsychologique développé par le Centre Mémoire du Centre Hospitalo-Universitaire de Nice. Les patients diagnostiqués avec une maladie d'Alzheimer (MA), des troubles vasculaires (Va, excluant les séquelles d'AVC) ou des troubles mixtes (Mx) avec au moins deux évaluations neuropsychologiques étaient inclus dans les sous-groupes d'analyses.

Résultats: Recueil de données auprès de 7033 patients, dont 61.8% de femme, d'âge moyen de 73.6 ± 13 ans pendant la période d'étude. Les résultats moyens à la première consultation étaient de 22/30 pour le Mini Mental State Examination (MMSE) et de 13/18 pour la Batterie Rapide d'Efficiences Frontales. 29.2% de nos patients étaient diagnostiqués avec un trouble cognitif majeur. 791 patients furent inclus dans les sous-groupes d'analyses. Chez eux, le déclin cognitif moyen était d'une perte d'environ 1.5 points par an pour le MMSE. Il semblerait que le déclin cognitif annuel était plus prononcé que la maladie d'Alzheimer était impliquée dans le processus pathologique (-2.0 ± 2.0 VS -0.7 ± 1.8 VS -1.6 ± 2.1 respectivement pour MA, Va, et Mx). Un diagnostic précoce au stade de trouble cognitif mineur, avec un score initial de MMSE plus élevé et un trouble vasculaire isolé semblaient être associés avec un déclin cognitif plus lent.

Conclusions : Le diagnostic étiologique et l'admission précoce dans le parcours de soins semblaient fortement associés avec l'évolution des fonctions cognitives. Cette étude semble identifier un déclin cognitif plus lent dans le sous-groupe de patient diagnostiqué avec des troubles vasculaires isolés. Ce résultat est à conforter par la réalisation d'études supplémentaires.

Mots clefs : troubles cognitifs, déclin cognitif, personne âgée, maladie d'Alzheimer, troubles vasculaires