

Subjective Cognitive Decline and amnestic Early and Late MCI. Progression to Incident Dementia and Alzheimer's Disease Dementia

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INTRODUCTION

- A large volume of studies has explored the role of the predementia states.
- The definition of MCI has been modified, thus originating the MCI sub-types: amnestic or non-amnestic sub-types, single or multiple domains¹.
- The new MCI labels - Late MCI (LMCI) and Early MCI (EMCI) have been useful to predict the progression to dementia aligned with the presence of amyloid positivity by PET scan².

OBJECTIVE

To investigate the prevalence of Subjective Cognitive Decline (SCD) and amnestic EMCI (a-EMCI) and LMCI (a-LMCI) and their progression to incident dementia and Alzheimer's Disease (AD) dementia, in a community cohort from São Paulo, Brazil.

METHODS

Population and design

- Data were retrospectively evaluated.
- A representative sample of 1,563 individuals aged ≥ 60 years, was evaluated in a dementia baseline study and followed in an incidence study.
- Dementia criteria: DSM IV.

Instruments

- Clinical questionnaire: investigation of 7 cognitive complaints.
- Fuld Object Memory Evaluation (FOME).
- Mini Mental State Examination (MMSE).
- Bayer-Activities of Daily Living scale (B-ADL).

Diagnostic Criteria

- Subjects with at least 1 cognitive complaint, without functional impairment (by B-ADL) and with specific scores in FOME were classified as having SCD, a-EMCI and a-LMCI.

SCD: up to 1.0 SD below the normal score on FOME and without global cognitive decline (by MMSE);
a-EMCI: between 1.0 and 1.5 SD below the normal score on FOME.
a-LMCI: 1.5 SD below the normal score on FOME and lower;
control: without cognitive complaint, functional impairment, global cognitive decline and memory impairment.

Statistical analysis

The progression of SCD, a-EMCI and a-LMCI to dementia and AD dementia was estimated by incidence rates (Poisson formula) and risks (Cox regression).

Ethical terms. Ethics Committee and signed informed consent term.

RESULTS

Table 1. Prevalence of SCD, a-EMCI, a-LMCI

	Prevalence	95% CI
SCD	54.6 (N=749)	52.1 - 57.1
a-EMCI	3.9% (N=54)	2.9 - 4.9
a-LMCI	4.9% (N=68)	3.8 - 6.0

Prevalence – associated factors

($p < 0.05$; logistic regression)

- SCD: hypertension, depression
- a-EMCI: higher age, lower cognition
- a-LMCI: stroke

Table 2. Progression to incident dementia and its sub-types

	Incidence Study*	Dementia all causes	AD	VD	AD VD	OCD
	N	N	N	N	N	N
Control	96	8	4	3	1	---
SCD	303	16	13	1	1	1
a-EMCI	16	4	4	---	---	---
a-LMCI	13	7	7	---	---	---

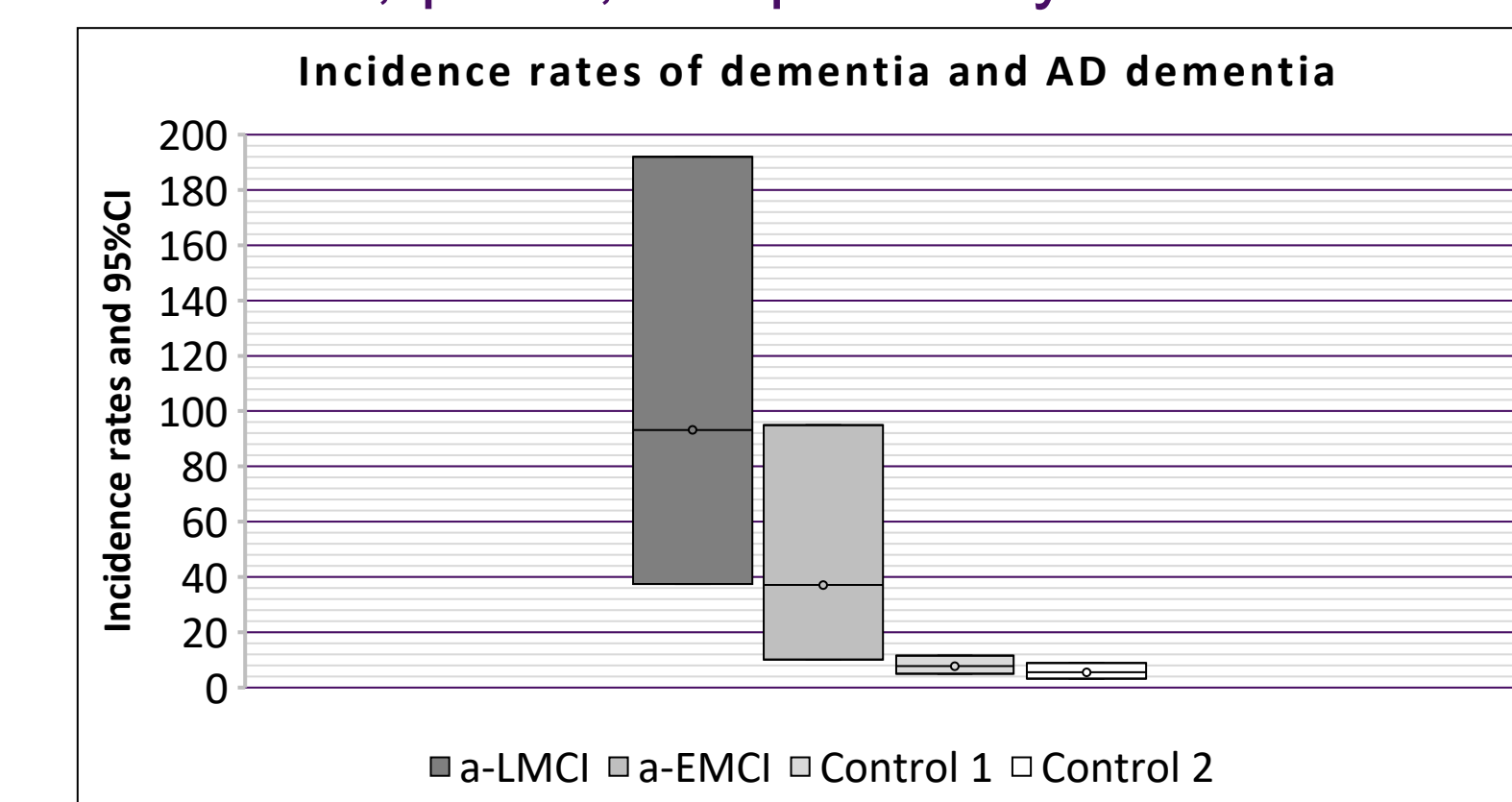
AD: Alzheimer's Disease dementia; VD: Vascular Dementia; ADVD: Alzheimer's Disease dementia and Vascular Dementia; OCD: other causes dementia

* Subjects who concluded the incidence study

Table 3. The risk of developing dementia and AD dementia, controlled by age (hazard ratio)

	Dementia		AD dementia	
	HR	95%CI	HR	95%CI
a-EMCI	2.72	0.92 - 8.04	3.64	1.19 - 11.09
	p value: 0.069		p value: 0.023	
a-LMCI	14.24	5.92 - 34.24	20.56	8.13 - 52.00
	p value: < 0.001		p value: < 0.001	

Figure 1. Incidence of dementia and AD dementia, per 1,000 person-years



Control 1: related to cases with dementia / Control 2: related to cases with AD dementia

CONCLUSIONS

- Both forms of a-MCI had significantly high rates of progression and high incidence rates of dementia and AD dementia, although the result for a-LMCI was two times greater of a-EMCI.
- The risk of developing AD dementia was higher in both forms of a-MCI.
- The results above corroborate previous findings^{3,4}, highlighting the relevance of the clinical research with the predementia states in predicting the progression to dementia.

References

1. Petersen RC. Mild cognitive impairment as a diagnostic entity. J Intern Med. 2004 Sep;256(3):183-94. 2. Petersen RC. MCI Criteria in ADNI: Meeting Biological Expectations. Neurology. 2021 Sep 20;97(12):597-599. 3. Solfrizzi V, Panza F, Colacicco AM et al.; Italian Longitudinal Study on Aging Working Group. Vascular risk factors, incidence of MCI, and rates of progression to dementia. Neurology. 2004 Nov 23;63(10):1882-91. 4. Godinho C, Camozzato AL, Onyszko D, Chaves ML. Estimation of the risk of conversion of mild cognitive impairment of Alzheimer type to Alzheimer's disease in a south Brazilian population-based elderly cohort: the PALA study. Int Psychogeriatr. 2012 Apr;24(4):674-81.

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