Correspondence

CIND AND MCI IN THE ITALIAN ELDERLY: FREQUENCY, VASCULAR RISK FACTORS, PROGRESSION TO DEMENTIA

To the Editor: Using data from the Italian Longitudinal Study on Aging (ILSA), Di Carlo et al. reported a higher (16.1%) prevalence of mild cognitive impairment (MCI) than we reported in this same elderly population (3.2%).[1]

An explanation for this difference may be the more liberal criterion for MCI (subjects not scoring >1 SD below the mean of an age- and education-adjusted mean on the Mini-Mental State Examination [MMSE]) than used by studies using more conventional criteria.[2] Using more conventional criteria (subjects not scoring >1.5 SDs below mean age- and education-adjusted on the MMSE and scoring >10th percentile below age- and education-adjusted on Babcock Story Recall Test [assessing episodic memory]) in exactly the same cohort, we found a prevalence rate of 3.2% for MCI.[3]

This diagnosis did not exclude subjects with mild impairment on activities of daily living and instrumental activities of daily living and individuals affected by numerous comorbidities not influencing global cognitive functions. Therefore, they may be well represented by aMCI.[3] Prevalence estimates of amnestic variants of MCI in other worldwide population-based studies are consistent with those reported in our study: 3% in France (Eugeria Longitudinal Study of Cognitive Aging); 3.1% in Germany (Leipzig Longitudinal Study of the Aged); 3.02% in Canada (Canadian Study of Health and Aging); and 3.2% in the United States (MoVIES study).[2] Two exceptions were 5% reported in an urban community in northern Manhattan,[4] closer to the MCI prevalence rate reported in our study rather than those estimated in the study by Di Carlo et al., and the 6% calculated in the Cardiovascular Health Study (CHS) Cognition Study.[5]

A second difference between Di Carlo et al. 's and our study on this same population is that we did not subdivide MCI in different subtypes.[3] In their study, subjects scoring >1 SD below the age- and education-specific mean only on the Digit Cancellation Test (assessing selective attention) and preserved memory were defined as MCI subjects with predominantly attentive deficit (single nonmemory MCI).

The cognitive assessment is not sufficiently comprehensive to permit accurate subdivision of MCI into cognitive subtypes because deficits in language, visuospatial skills, problem-solving, or abstraction were not excluded with this brief neuropsychological test battery. At the same time, in the aMCI category the identification of just another impaired cognitive domain other than episodic memory and selective attention should address the diagnosis to another mdMCI subtype (amnestic mdMCI).[1]

In the CHS Cognition Study,[6] the authors cited for proximity about their MCI prevalence estimates, the mdMCI prevalence rate was 16% vs 1.3% estimated in the study by Di Carlo et al. While patients with the conventional MCI criteria have been shown to have an increased likelihood of Alzheimer disease (AD) neuropathology and subsequent rates of clinical conversion to Alzheimer dementia,[6] the more liberal criteria used in this study have not yet been shown to have that kind of relevance to AD. For this reason, prevalence estimates using the more liberal criteria in the study by Di Carlo and colleagues should be interpreted with caution.

We look forward to estimating the prevalence rates of MCI subtypes using the better established yet still evolving MCI criteria, using data from the Italian Project on Epidemiology of Alzheimer's disease (IPREA), an Italian population-based study specifically designed for this aim.[7] We hope readers will not be confused by the prevalence estimates generated from the ILSA data set.

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Reply from the Authors: We thank Solfrizzi et al. for their comments. Diagnostic criteria are still unclear for defining subgroups of patients with different domain patterns of MCI. Using the same

population-based ILSA dataset, we estimated—at the same time prevalences of cognitive impairment no dementia (CIND)—MCI and relative subtypes, to determine a possibly different impact of risk factors.[1]

Our target was different and more complex than estimating purely aMCI and led us to use selective methodologic approaches and criteria which can explain discrepant figures. Solfrizzi et al. point out that the prevalence we reported for MCI (16.1%) was definitely higher compared to their figure of 3.2%.[3] The 16.1% prevalence we reported was the prevalence of all MCI subtypes combined. The prevalence of aMCI in our study was 7.0%, which is not far from the 3.2% reported by Solfrizzi et al.

The differences in aMCI criteria should be emphasized. Solfrizzi et al. 's aMCI rates were based on subjects not scoring more than 1.5 SD below mean age- and education-adjusted on the MMSE (normal general cognitive function) and scoring >10th percentile below age- and education-adjusted on the Babcock Story Recall Test (BSRT).

In our study, the diagnosis of aMCI was made when participants did not score >1 SD below the age- and education-specific mean at the MMSE (non-impaired general cognitive function), scored >1 SD below the age-and education- specific mean in BSRT, and did not score >1 SD below the age-and education-specific mean on Digit Cancellation Test. Using 1 SD to define normal general cognitive function is probably more restrictive than using 1.5 SD.

In the Leipzig Longitudinal Study of the Aged, prevalence varied from 3.1% to 5.1%[8]; in the MoVIES Study from 3.2% to 6.3%.[9] In these and the Eugeria Longitudinal Study of Cognitive Aging,[10] a decrement of more than 1 SD was used. In the Cardiovascular Health Study Cognition Study, prevalence was 18.8% for all subtypes of MCI, and 6% for aMCI,[5] while in the northern Manhattan sample the prevalence was 28.3% for overall MCI, and 5% for aMCI.[4]

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1. Di Carlo A, Lamassa M, Baldereschi M, et al, for The Italian Longitudinal Study on Aging Working Group. CIND and MCI in the Italian elderly: frequency, vascular risk factors, progression to dementia. Neurology 2007;68:1909–1916.
2. Panza F, D'Introno A, Colacicco AM, et al. Current epidemiology of mild cognitive impairment and other predementia syndromes. Am J Geriatr Psychiatry 2005; 13:633–644.
3. Solfrizzi V, Panza F, Colacicco AM, et al, for The Italian Longitudinal Study on Aging Working Group. Vascular risk factors, incidence of MCI, and rates of progression to dementia. Neurology 2004;63:1882–1891.
4. Manly JJ, Bell-McGinty S, Tang MX, et al. Implementing diagnostic criteria and estimating frequency of mild cognitive impairment in an urban community. Arch Neurol 2005;62:1739–1746.
5. Lopez OL, Jagust WJ, DeKosky ST, et al. Prevalence and classification of mild cognitive impairment in the Cardiovascular Health Study Cognition Study: part 1. Arch Neurol 2003;60:1385–1389.
6. Jicha GA, Parisi JE, Dickson DW, et al. Neuropathologic outcome of mild cognitive impairment following progression to clinical dementia. Arch Neurol 2006;63: 674–681.
7. Scafato E, Gandin C, Farchi G, et al, IPREA Working Group. Italian Project on Epidemiology of Alzheimer's disease (I.PR.E.A.): study design and methodology of cross-sectional survey. Aging Clin Exp Res 2005;17: 29–34.
8. Busse A, Bischkopf J, Riedel-Heller SG, Angermeyer MC. Mild cognitive impairment: prevalence and incidence according to different diagnostic criteria. Results of the Leipzig Longitudinal Study of the Aged (LEILA75+). Br J Psychiatry 2003;182:449–454.
9. Ganguli M, Dodge HH, Shen C, DeKosky ST. Mild cognitive impairment, amnestic type: an epidemiologic study. Neurology 2004;63:115–121.
10. Ritchie K, Artero S, Touchon J. Classification criteria for mild cognitive impairment: a population-based validation study. Neurology 2001;56:37–42.

CORRECTION

Randomized, blind, controlled trial of transdermal rotigotine in early Parkinson disease In the article "Randomized, blind, controlled trial of transdermal rotigotine in early Parkinson disease" by R.L. Watts et al. (*Neurology* 2007;68:272–276), the dates of receipt and acceptance provided in the footnote are incorrect. The correct date of receipt was April 21, 2006, and the correct date of acceptance for publication was October 24, 2006. The Editorial Office regrets the error.