

Supplementary Data

Clinical Differences in Patients with Alzheimer's Disease According to the Presence or Absence of Anosognosia: Implications for Perceived Quality of Life

Josep L. Conde-Sala^{a,*}, Ramón Reñé-Ramírez^b, Oriol Turró-Garriga^{c,d}, Jordi Gascón-Bayarri^b, Montserrat Juncadella-Puig^b, Laura Moreno-Cordón^b, Vanesa Viñas-Diez^b and Josep Garre-Olmo^{c,e}

^a*Faculty of Psychology, University of Barcelona, Barcelona, Spain*

^b*Dementia Unit, Department of Neurology, Bellvitge University Hospital, Hospitalet de Llobregat, Spain*

^c*Research Unit, Santa Caterina Hospital, Institut d'Assistència Sanitària, Salt, Spain*

^d*Department of Psychiatry and Forensic Medicine, Autonomous University of Barcelona, Bellaterra, Spain*

^e*Department of Psychology, University of Girona, Girona, Spain*

Handling Associate Editor: Ramon Luengo-Fernandez

Accepted 2 October 2012

*Correspondence to: Josep Lluís Conde-Sala, University of Barcelona, Passeig Vall d'Hebron, 171, 08035 Barcelona, Spain.
Tel.: +34 93 312 5814; Fax: +34 93 402 1368; E-mail: jllconde@ub.edu.

Supplementary Table 1
Correlations between patient factors and anosognosia

Correlations with AQ-D	All cases (<i>n</i> = 164)		NM-AN (<i>n</i> = 69)		S-AN (<i>n</i> = 95)	
	<i>r_s</i>	<i>P</i>	<i>r_s</i>	<i>p</i>	<i>r_s</i>	<i>p</i>
NPI (behavior) Total	0.67	<0.001	0.15	0.194	0.44	<0.001
Delusions	0.25	0.001	0.08	0.483	0.12	0.238
Hallucinations	0.15	0.044	0.03	0.800	−0.03	0.774
Agitation	0.43	<0.001	0.14	0.241	0.39	<0.001
Depression	0.05	0.457	−0.07	0.522	−0.05	0.588
Anxiety	0.23	0.002	0.01	0.897	0.15	0.129
Elation	0.34	<0.001	0.24	0.045	0.29	0.003
Apathy	0.47	<0.001	0.22	0.060	0.17	0.095
Disinhibition	0.52	<0.001	0.22	0.063	0.34	0.001
Irritability	0.44	<0.001	0.08	0.493	0.32	0.002
Aberrant motor behavior	0.40	<0.001	0.13	0.285	0.29	0.003
Sleep disorders	0.14	0.063	−0.04	0.705	0.09	0.386
Appetite	0.45	<0.001	0.16	0.186	0.29	0.004
DAD (function) Total	−0.64	<0.001	−0.40	0.001	−0.39	<0.001
Basic ADL	−0.59	<0.001	−0.26	0.026	−0.34	0.001
Instrumental ADL	−0.64	<0.001	−0.42	<0.001	−0.40	<0.001
GDS-d (depression)	−0.27	<0.001	−0.11	0.343	−0.20	0.053
MMSE (cognition)	−0.25	0.001	−0.24	0.040	−0.10	0.323
Months since diagnosis	0.40	<0.001	0.24	0.044	0.18	0.067
Age of patients	0.19	0.012	−0.25	0.037	0.17	0.096
QoL-AD (quality of life of patient)						
Patients	0.23	0.003	0.16	0.170	0.09	0.338
Caregivers	−0.56	<0.001	−0.27	0.022	−0.40	<0.001*
ZBI (Caregiver burden)	0.46	<0.001	0.34	0.011	0.24	0.017

r_s, Spearman coefficient; **r*, Pearson correlation. *p*-values <0.05 are shown in bold. No/mild anosognosia (NM-AN)=<32 AQ-D; Severe anosognosia (S-AN)=≥32 AQ-D. MMSE, Mini-Mental State Examination; DAD, Disability Assessment for Dementia; ADL, Activities of daily living; NPI, Neuropsychiatric Inventory; GDS-d, Geriatric Depression Scale; AQ-D, Anosognosia Questionnaire-Dementia; QoL-AD, Quality of Life-Alzheimer's disease; ZBI, Zarit Burden Interview.

Supplementary Table 2
Behavioral and psychological symptoms of dementia and GDS stage with/without severe anosognosia

	GDS 4		GDS 5		GDS 6		Differences	
	<i>n</i>	Mean $\pm$ SD	<i>n</i>	Mean $\pm$ SD	<i>n</i>	Mean $\pm$ SD	χ^2 (df)	<i>p</i>
NPI-apathy								
All cases	71	3.5 $\pm$ 3.8 ^a	52	6.1 $\pm$ 3.9 ^b	41	8.3 $\pm$ 3.8 ^c	33.8 (2)	<0.001
1. NM-AN	49	2.5 $\pm$ 3.2	15	3.7 $\pm$ 4.0	5	8.8 $\pm$ 11.2 ^c	10.5 (2)	0.005
2. S-AN	22	5.8 $\pm$ 4.1	37	7.1 $\pm$ 3.5	36	8.3 $\pm$ 3.9	5.5 (2)	0.062
Diff 1/2 (<i>z</i> , <i>p</i> ; <i>d</i>)	3.2,	0.001 ; 0.89	2.5,	0.010 ; 0.90	0.1,	0.850		
NPI-aberrant motor behavior								
All cases	71	1.0 $\pm$ 2.5	52	2.5 $\pm$ 4.0	41	3.9 $\pm$ 4.5 ^c	14.0 (2)	0.001
1. NM-AN	49	0.4 $\pm$ 1.4	15	0.6 $\pm$ 1.2	5	2.2 $\pm$ 2.6	6.4 (2)	0.040
2. S-AN	22	2.4 $\pm$ 3.6	37	3.2 $\pm$ 4.4	36	4.2 $\pm$ 4.7	1.8 (2)	0.405
Diff 1/2 (<i>z</i> , <i>p</i> ; <i>d</i>)	2.6,	0.008 ; 0.73	1.9,	0.049 ; 0.80	0.5,	0.569		
NPI-appetite disorders								
All cases	71	1.4 $\pm$ 2.6 ^a	52	3.0 $\pm$ 3.8	41	3.8 $\pm$ 3.8 ^c	12.9 (2)	0.002
1. NM-AN	49	0.6 $\pm$ 1.6	15	1.4 $\pm$ 2.4	5	3.2 $\pm$ 4.3 ^c	3.3 (2)	0.192
2. S-AN	22	3.2 $\pm$ 3.6	37	3.6 $\pm$ 4.1	36	3.9 $\pm$ 4.1	0.3 (2)	0.844
Diff 1/2 (<i>z</i> , <i>p</i> ; <i>d</i>)	3.6,	<0.001 ; 0.93	1.7,	0.072	0.5,	0.576		
NPI-agitation								
All cases	71	1.8 $\pm$ 3.1	52	2.5 $\pm$ 3.1	41	3.2 $\pm$ 3.9	4.9 (2)	0.086
1. NM-AN	49	1.3 $\pm$ 2.5	15	1.4 $\pm$ 2.4	5	0.0 $\pm$ 0.0	2.4 (2)	0.289
2. S-AN	22	3.1 $\pm$ 4.0	37	3.0 $\pm$ 3.3	36	3.6 $\pm$ 3.9	0.4 (2)	0.818
Diff 1/2 (<i>z</i> , <i>p</i> ; <i>d</i>)	2.4,	0.016 ; 0.53	1.6,	0.096	2.4,	0.016 ; 1.30		
NPI-disinhibition								
All cases	71	0.6 $\pm$ 1.8 ^a	52	2.0 $\pm$ 3.2	41	3.1 $\pm$ 3.9 ^c	18.9 (2)	<0.001
1. NM-AN	49	0.2 $\pm$ 0.5	15	0.2 $\pm$ 0.5	5	0.2 $\pm$ 0.4	0.8 (2)	0.958
2. S-AN	22	1.6 $\pm$ 3.0	37	2.7 $\pm$ 3.5	36	3.5 $\pm$ 4.0	4.4 (2)	0.108
Diff 1/2 (<i>z</i> , <i>p</i> ; <i>d</i>)	2.1,	0.035 ; 0.65	2.8,	0.004 ; 1.00	1.9,	0.050 ; 1.16		
NPI-irritability								
All cases	71	2.5 $\pm$ 3.5 ^a	52	4.4 $\pm$ 3.9	41	4.0 $\pm$ 4.5	8.8 (2)	0.012
1. NM-AN	49	1.9 $\pm$ 3.2	15	1.4 $\pm$ 2.2	5	0.2 $\pm$ 0.4	1.2 (2)	0.539
2. S-AN	22	3.7 $\pm$ 3.9	37	5.6 $\pm$ 3.8	36	4.5 $\pm$ 4.6	3.4 (2)	0.175
Diff 1/2 (<i>z</i> , <i>p</i> ; <i>d</i>)	2.4,	0.015 ; 0.50	3.6,	0.010 ; 1.35	2.0,	0.044 ; 1.31		

Groups: 1. No/mild anosognosia (NM-AN) = <32 AQ-D; 2. Severe anosognosia (S-AN) = $\geq$ 32 AQ-D; NPI, Neuropsychiatric Inventory; χ^2 , Kruskal-Wallis, significant with Bonferroni *post-hoc*: ^aContrast GDS 4–5, ^bContrast GDS 5–6, ^cContrast GDS 4–6; *z*, Mann-Whitney U; *d*, Cohen's *d*. *p*-values <0.05 are shown in bold.