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Obstructive sleep apnoea and cognitive decline in mild-to-moderate Alzheimer's disease

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Cite this article as: Jorge C, Targa A, Benítez ID, *et al*. Obstructive sleep apnoea and cognitive decline in mild-to-moderate Alzheimer's disease. *Eur Respir J* 2020; 56: 2000523 [https://doi.org/10.1183/13993003.00523-2020].

ABSTRACT We evaluated the influence of untreated obstructive sleep apnoea (OSA) on the magnitude of cognitive decline and on several cognitive subdomains in patients with mild-to-moderate Alzheimer's disease.

In this single-centre study, 144 patients were recruited prospectively from a cognitive impairment unit and underwent overnight polysomnography.

The mean±SD change in the Alzheimer's Disease Assessment Scale cognitive subscale (ADAS-cog) score at 12 months was 3.19±5.61 in the non-OSA group and 0.08±5.62 in the OSA group, with an intergroup difference of −3.36 (95% CI 0.19–0.16; p=0.002). We did not observe a significant difference in any cognitive subdomains at 12 months. Regarding Mini-Mental State Examination scores at 36 months, the mean change was 1.69 (95% CI −1.26–4.64; p=0.445). No significant differences were found among different OSA severity groups.

We observed that ADAS-cog scores were better in the OSA group than in the non-OSA group by a statistically but not clinically significant margin. We did not find differences in the different cognitive subdomains after 1 year or in global cognition after 3 years of follow-up.