Letters to the Editor

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C-reactive protein and delirium in acute ill elderly patients

SIR—We have read with great interest the research letter by MacDonald et al. [1] and the related editorial by George et al. [2] recently published in Age and Ageing on the relation between C-reactive protein (C-RP) and delirium.

We would like to contribute to this topic with data obtained in a recently developed medical sub-intensive care unit (SICU) for elderly patients. Our model is developed to meet the needs of critically ill elderly medical patients who do not require global intensive care but a higher level of care than that provided in a general ward. The technological equipment of the SICU allows non-invasive monitoring of vital signs and/or intensive interventions. From January 2004 to December 2006, 1,369 patients aged ≥60 years were admitted to SICU, mean age 77.2 ± 11 years, males 51%, Barthel index (BI) before admission 71.4 ± 31.3, BI at admission 33.0 ± 35.1, BI at discharge 51.6 ± 38.3, Mini Mental State Examination (MMSE) at discharge 20.7 ± 9.8, Charlson Index 6.0 ± 2.1, APACHE-II score 14.2 ± 6.3, APACHE-APS subscore 8.6 ± 5.9, number of drugs 7.4 ± 3.1 and length of stay in hospital 6.5 ± 5 days. Patients were assessed for delirium at admission and three times a day (until remission from delirium), using the Confusion Assessment Method for the Intensive Care Unit (CAM-ICU) [3].

Three hundred and one (21.5%) patients had delirium; 132 (9.4%) were cases of prevalent and 169 (12.1%) of incident delirium. Mean MMSE-score was 13.06 ± 10.2, was 16.7 ± 8.5 and 9.3 ± 10.5 in the total number of subjects affected by delirium and in those affected by incident and prevalent delirium respectively. Moreover prevalence of delirium was 39.7%, 15.3% and 24.3% for total, incident and prevalent delirium respectively. Mean C-RP values were 8.8 ± 9.8, 7.85 ± 9.6 and 9.6 ± 9.9 for total, incident and prevalent delirium respectively. Furthermore patients with incident delirium showed better functional status than those with prevalent, as assessed with BI 2 weeks before admission (76.02 ± 29.07 vs 61.6 ± 31.6), at admission (16.81 ± 24.9 vs 7.8 ± 18.9) and at discharge (34.9 ± 32.1 vs 14.9 ± 26.7). Also the severity of illness was found to be higher in prevalent delirium; in fact Acute-Physiology-Score (APS) was 11.6 ± 6.8, 9.4 ± 5.5 and 13.23 ± 7.3 for total, incident and prevalent delirium respectively. Comorbidity (Charlson Index score) had the same trend: 6.8 ± 1.9, 6.5 ± 1.8 and 7 ± 1.8 for total, incident and prevalent delirium respectively.

Data show that prevalent delirium, characterised by a worse health status, high disability, and, as previously reported, by a worse prognosis [4, 5] is associated with higher C-RP plasma levels, in comparison with incident delirium. This fact support the hypothesis that inflammation mediates different degree of vulnerability to delirium in older people.

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