Depression trajectories and the risk of mortality 10 years after stroke: the South London Stroke Register

Ayis, S PhD1, Rudd, AG FRCP1,2, Ayerbe, L PhD3, Crichton, SL PhD1 and Wolfe CDA FFPH1,4

Abstract

Background: In a recent study we have established heterogeneous patterns for the development of symptoms of depression (trajectories) after stroke. Here we examined the risk of 10 years mortality among these.

Methods: Data from the South London Stroke Register (1998-2013) were used. Patients were assessed on socio-demographics, stroke severity, and medical history at stroke onset, and were followed up at 3 months after stroke, then annually. The Hospital Anxiety and Depression scale (HADS) was used to screen for depression at each follow up. A Latent Class Growth Analysis (LCGA) method was used to derive trajectories of depression symptoms over 5 years after stroke. The Cox regression model was used to estimate the hazard ratio (HR) of 10 years mortality among patients in the trajectories derived.

Results: Of 761 patients who survived at least 5 years after stroke four trajectories of depression were identified (Group I- IV), comprising 15.51% who had no symptoms and remained so over time; 49.54% had mild symptoms, predicted mean HADS score, 3.89 (se=0.30); 28.65% had moderate symptoms, a tendency to get worse over time, predicted mean score 7.36 (se=0.35) and 6.31% of patients had severe symptoms, predicted mean score, 15.74 (se=1.06).

The age adjusted HRs (95% CI) of 10 years mortality for groups II-IV, respectively were: 1.32(1.02-1.71), 1.50(1.14 -1.98), and 1.49(1.00-2.22), significantly higher than group I (reference), at the 5% significance level.

Conclusions: The risk of 10 years’ mortality is relatively higher in patients with increased depression symptoms over 5 years after stroke.