

Introduction. Hemorrhagic transformation (HT), a complication of ischemic stroke (IS) is supposed to influence patient's prognosis. Aim of our study was to evaluate, in a hospital-based series of patients not treated with thrombolysis, the relationship between HT and late mortality.

Methods. Mortality of individuals with spontaneous HT was compared to that of individuals without. Medical records of patients diagnosed with anterior IS during the period 2004-2006 were reviewed. Living status was obtained from the public record office of the municipality of Palermo or indirectly by telephone interview. Outcome measure was 90 days survival after IS onset. Kaplan-Meier estimates were used to construct survival curves. Cox proportional hazards model was used in a univariate analysis to estimate RR for the main outcome measure (death) in the different strata. We evaluated the relationship between HT and the main mortality risk factors. HT was stratified in hemorrhagic infarction (HI) and parenchymal hematoma (PH).

Results. Living status was determined for 96.7%. At 3 month follow-up, mortality rate was 12.1% (28/232). At multivariate analysis, large infarct size (OR 2.7, 95% CI 1.2, 6.0, $p=0.02$) and HT (OR 2.3, 95% CI 1.0, 5.4, $p = 0.05$) were significantly associated with increased mortality. Parenchymal hematoma was the strongest independent risk factor for late mortality (OR 7.9, 95% CI 2.9, 21.4, $p < 0.0001$).

Conclusions. Infarct size and HT play a significant role in late mortality after IS. Parenchymal hematoma is the strongest predictor of late mortality.