INTRACEREBRAL HEMORRHAGE IN ICU: BETTER THAN EXPECTED!

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Background: Intracerebral hemorrhage (ICH) has high morbidity and mortality. The *ICH score* was developed to predict outcomes and limit futile overtreatment. Recent implementations of ICH management (i.e. early surgery and invasive monitoring) have significantly impacted survival. Do-not-resuscitate orders (DNROs) should change accordingly.

Objectives: To compare observed and predicted 6-months mortality in a cohort of ICH patients managed following the latest developments of ICH care at Neurosurgical ICU of San Gerardo Hospital (Monza, Italy) from 2013 to 2015.

Methods: Retrospective analysis of prospectively collected data of ICH patients with ICU length-of-stay > 24 hours. We retrieved: DNROs within 48 hours from admission, 30 days mortality and modified Rankin Scale (mRS), CT scans. The *ICH score* was calculated.

Results: 100 consecutive patients (64±14 years old, GCS 7±3 at admission, ICH volume 75±50 cm^3) were included. 28% had DNRO and died (71±11 years old, GCS 4±2 at admission, ICH volume 110±46 cm^3). In the cohort of patients without DNRO (72%, 62±15 years old, 57% males, GCS 9±3 at admission, ICH volume 61±44 cm^3, p <0.05), surgery was performed in 51 (71%). Overall, ICU mortality was lower than expected following the *ICU score* (see Figure) (i.e. 33%). mRS was ≤3 and >3 in 21 (30%) and 46 (64%) of the discharged patients, respectively.

Conclusions: We observed mortality to be lower than predicted and functional outcome to be acceptable in one-third of patients. Early DNRO policies should be carefully evaluated in light of the detected lack of agreement between predicted and observed mortality.
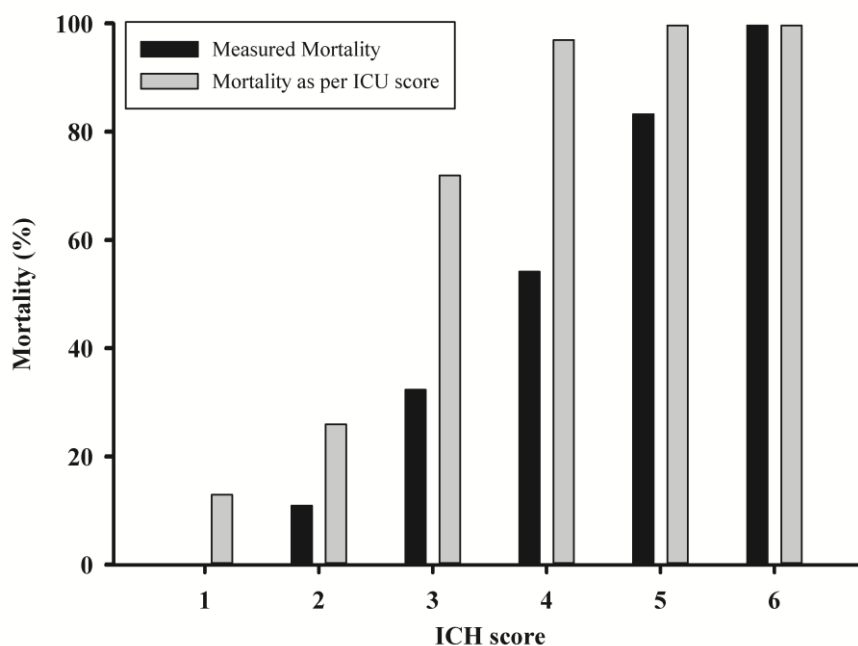
Figure 1. Observed mortality and expected mortality at 30 days according to ICH score.