

Introduction

In the literature on aneurysmal subarachnoid hemorrhage (aSAH) studies on factors heralding a favorable outcome have emerged only sporadically. We define a "favorable outcome" thus: 1) survived > 12 months after aSAH, 2) independent in the activities of daily living (ADL), 3) subjective health satisfaction, 4) modified Rankin score (mRS) of 0, 1 or 2, and 5) being able to use public transportation. This paper analyses factors that may herald a favorable outcome, in terms of subjective health status and remaining life-years.

Methods

123 patients aged 70+ years with acute aSAH were admitted from January 1996 to December 2004. Their median age was 74.3 years (IQR: 72–77), and 86/123 (71 %) was females. Aneurysm repair, by microsurgical clip exclusion or endovascular coil occlusion was performed in 96 patients, at median 3 days (IQR: 2-5 days), after last bleed. Median 30 months (IQR 20-38 months) after aSAH, all 67 survivors received a package including the SF-36 health status questionnaire; response rate 91%.

Results

Following repair of the burst aneurysm, mortality was 9.4%, 14.8%, 26% and 29.2% after 1, 3, 6 and 12 months. Factors influencing 12-months' mortality included Fisher score, WFNS score, acute hydrocephalus. ($p < 0.01$). Unsurprisingly, the benefit of repair was very significant ($p < 0.001$).

The only statistically significant candidate predictor for a favorable outcome was the pre-SAHA Karnofsky score ($p = 0.033$). The ADL score was predictive of long-term survival ($p = 0.033$).

In January 2015, 27 individuals had exceeded their demographically remaining life expectancy, significant predictors were having completed secondary school, and at follow-up they expressed satisfaction with their current health.

Conclusions

This study provided an exceptionally long observation time, accordingly revealing data not commonly encountered. While survival following aSAH primarily hinges on acute phase variables and in particular on the repair of the burst aneurysm, long-term outcomes seem to depend more on factors that may not be regularly considered in the neurosurgical management of the elderly aSAH patient.

Learning Objectives

Elderly patients With aneurysmal subarachnoid hemorrhage do comparatively well and a substantial number of them survive well beyond their demographical life expectancy.

Only studies on follow-up "to the bitter end" can reveal this type of data.

In the past it was posited that the life expectancy of elderly aSAH patients was limited, thus aneurysm repair was not indicated. Our paper disproves such statements.

References

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