

Factors Influencing Long-term Health-Related Quality of Life among Patients After Aneurysmal and Nonaneurysmal Subarachnoid Hemorrhage

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Introduction

Anecdotal evidence and contradictory research suggest that patients with NASAH experience some of the same health-related quality of life (HRQoL) issues as patients with ASAH. HRQoL was measured in many studies by tools that are not good indicators of multidimensional domains of health-related quality of life. Patients in these studies have been classified as having "good outcomes" or having a "benign hemorrhage," without having returned to their pre-hemorrhage level of functioning. The goal of this study was to detect the strength of association and differences in HRQoL between patients who experienced a NASAH versus an ASAH. Factors influencing NASAH patients' experiences of HRQoL issues were determined and compared to and adjusted to those of ASAH patients.

Methods

The purpose of this quantitative survey design study was to compare health-related quality of life (HRQoL) 1 to 3 years post-hemorrhage in patients who have experienced a NASAH to those who have experienced an ASAH. This is the first US study to specifically investigate HRQoL in NASAH and the second study comparing HRQoL outcomes between aneurysmal and nonaneurysmal subarachnoid hemorrhage patients.

Results

The results were generated by analysis of quantitative data collected from six instruments. These results show that patients with aneurysmal and nonaneurysmal subarachnoid hemorrhage had more similarities than differences. This outcome is consistent with the underpinning hypothesis for this study, i.e., that the health-related quality of life of these groups would not differ significantly before and after controlling for severity of hemorrhage, age, and time since hemorrhage.

The nonaneurysmal group had more subjective physical symptom complaints, and the aneurysmal group had more emotional symptoms. However, the nonaneurysmal group had a lower 12-Item Short Form Health Survey (SF-12) mental component score (MCS), by 2.03 units, than the aneurysmal group.

Only the nonaneurysmal group feared having a second subarachnoid hemorrhage. The two groups differed significantly in their employment status; only 52% of nonaneurysmal patients were employed post hemorrhage in the same position as before their hemorrhage versus 63% of aneurysmal patients.

Both groups had low levels of Post Traumatic Stress Disorder (PTSD), and these levels did not differ significantly between groups. However, PTSD and social support were shown by regression analysis to impact HRQoL. Subjects with higher PTSD scores (more PTSD symptoms) had lower scores on both the SF-12 and overall Stroke Scale Quality of Life (SS-QOL) scores, indicating worse health-related quality of life. Subjects with more perceived social support had higher overall SS-QOL scores, and greater HRQoL. Lastly, the subjects reported wanting more information about their diagnosis/plan of care during all phases of acute inpatient hospitalization, during rehabilitation, and upon discharge.

Conclusions

We recommend that clinicians assess for PTSD in all subarachnoid hemorrhage patients and institute treatment early, which decrease the negative effects on HRQoL. This may include offering psychological services or social work early in the hospital course to all SAH patients. Further research are needed to assist in interventions that improve vocational reintegration after SAH. Our results show that the nonaneurysmal population suffers from the same HRQoL issues that the aneurysmal population encounters. NASAH patients in previous studies have been classified as having a "good outcome" or having a "benign hemorrhage," without having returned to their pre-hemorrhage level of functioning. Neurosurgery practices should consider referring NASAH patients to the same types of support services that the ASAH patients receive. These would include physical, occupational and speech therapies. Many times, NASAH patients do not qualify for acute rehabilitation. In these cases, they should be given a referral for home occupational therapy for a home safety and cognitive evaluation. A referral to cognitive neurologists should be considered for every SAH patient, particularly those who have been identified by occupational therapy as having cognitive deficits. NASAH patients should no longer be referred to as having suffered a "benign hemorrhage." They have had a life changing hemorrhage that may forever change their lives and impact their HRQoL