
Recent decades have seen several advances in medical care for acute stroke patients, but there has been little systematic documentation of these changes. This study examined changes in technology use and medical therapies for hospitalized acute stroke during the 1980s. For 1980, 1985, and 1990, we obtained discharge diagnosis lists from Minneapolis-St Paul metropolitan hospitals, identified hospitalizations for acute stroke of patients aged 30 to 74 years, and selected a 50% random sample. Trained nurses abstracted the medical records. Strokes were classified as hemorrhagic or ischemic based on discharge diagnosis code (using the International Classification of Diseases, 9th Revision) and findings from computed tomography (CT) or magnetic resonance imaging (MRI). Strokes classified as ischemic totaled 459 in 1980, 549 in 1985, and 657 in 1990. There were approximately 100 hemorrhagic stroke patients in each survey year. Throughout the 1980s, there was a trend toward both greater and earlier use of CT and MRI to diagnose stroke. By 1990, only 3% of patients did not receive CT or MRI during the acute hospital stay, and the percentage of patients scanned on the first day of hospitalization almost doubled from 43% in 1980 to 76% in 1990 (P=.0001). For ischemic stroke patients, the use of carotid ultrasound doubled from 24% to 48% between 1985 and 1990 (P<.0005), and the probability of identifying a possibly embolic source increased from 27% in 1980 to 40% in 1990 (P<.0005). The use of anticoagulants to treat ischemic stroke decreased from 1985 to 1990 (heparin, 53% to 47%, P=.030; coumadin, 37% to 31%, P=.032), whereas the use of aspirin increased by over 50% (from 27% to 41%, P<.0005). Finally, the mean length of stay was halved from 20 days in 1980...
to 10 days in 1990 (P=.0001). This study documented several significant time trends in acute stroke care. Whether these trends account for some of the improvement in stroke survival during the 1980s is uncertain.