OBJECTIVE: Recent studies suggest that carotid endarterectomy (CEA) is more effective when performed closer to an ischemic event than after an arbitrary 4- to 6-week delay. Factors need to be identified to evaluate potential perioperative complications after early CEA. METHODS: We investigated the influence of several clinical and morphological variables on the perioperative combined stroke and mortality rate and their influence on the modified Rankin-scale (mRS). In order to increase the statistical power, we combined data from three clinical studies (one multicenter and two single center trials) concerning the CEA after a waiting period of no more than 28 days. A perioperative stroke was defined as an important of at least 1 score in the mRS. Statistical analysis included univariate and multivariate analysis. RESULTS: A total of 226 patients (167 male), aged between 30 and 87 years (median 65.05 years) underwent CEA following an ischemic stroke within a period of no more than 28 days (median 12 days). The majority (>90%) showed severe stenosis of the internal carotid artery (>70%), 149 patients (66%) were ranked Rankin2, P = .0245) for a deterioration of the postoperative neurological status of at least 1 Rankin grade. There was also a trend concerning the Rankin scale at admission (Rankin>2, P = .0658). The logistic regression analysis showed
that patients with an ASA classification > 2 and a preoperative Rankin > 2 that were treated within 12 days after the initial ischemic event had the greatest risk for a perioperative deterioration of their neurological symptoms (odds ratio: 4.4, 1.48-13.0; P = .01). CONCLUSION: The ASA classification and the neurological status measured by the Rankin scale are predictive variables for the clinical perioperative outcome in patients treated within 28 days after an ischemic stroke. Patients ranked ASA