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Functional recovery after traumatic transtentorial herniation.

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Abstract

To elucidate the factors associated with functional recovery after traumatic transtentorial herniation, we reviewed the records of 153 consecutive patients admitted with clinical signs of transtentorial herniation (altered level of consciousness, anisocoria or pupillary unresponsiveness, and abnormal motor findings). Overall, 28 patients (18%) had a functional outcome: 14 patients (9%) made a good recovery and 14 were moderately disabled. Sixteen patients (10.5%) were severely disabled or vegetative, and 104 (60%) died. Compared with patients who died or were left severely disabled or vegetative, patients who had a good recovery were younger (21 versus 38 years), were significantly more likely to be children (less than or equal to 17 years old) and have anisocoria and a deteriorating Glasgow Coma Score (GCS), and were significantly less likely to be flaccid or have bilaterally fixed pupils; moderately disabled patients also had a lower median age and a higher frequency of anisocoria. There was no difference in the incidence of significant intracranial hematomas between patients with a functional outcome and those with a nonfunctional outcome. Twenty-seven percent of the 95 patients with anisocoria had a good outcome or moderate disability, whereas only 3.5% of the 58 patients with bilaterally fixed and dilated pupils at admission had a functional recovery (P less than 0.05). Age, level of consciousness, and the degree of residual upper brain stem function at admission appear to be the most important determinants of functional outcome after traumatic transtentorial herniation.

Comment in

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