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CLINICAL ARTICLES

One-year outcome following craniotomy for traumatic hematoma in patients with fixed dilated pupils

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Abstract

✓ Forty consecutive patients who underwent craniotomy for traumatic hematoma after developing bilateral fixed dilated pupils were studied to determine the factors influencing quality of survival and to seek criteria for management. Clinical and computerized tomography (CT) data were correlated with outcome 1 year after craniotomy. The functional recovery (good outcome or moderate disability) rate was 25%, with a mortality rate of 43%. Patients with subdural hematoma had a higher mortality rate (64%) compared to patients with extradural hematoma (18%) (chi-square test, $p > 0.05$). Other factors associated with markedly increased morbidity and mortality were increasing age (> 20 years), a prolonged interval (> 3 hours) between loss of pupillary reactivity and craniotomy, compression of basal cisterns, and presence of subarachnoid hemorrhage on CT. There were no survivors among patients exhibiting any of the following features: surgery 6 hours or more after bilateral loss of pupillary reactivity; age greater than 65 years; or absent motor response. Apart from the latter group, the nature of motor response (before pharmacological paralysis and intubation) was not a reliable predictor of mortality. The results suggest that the presence of an acute subdural hematoma is the single most important predictor of negative outcome in patients with bilateral unresponsive pupils.

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