
Recording of the median nerve SSEPs is a non-invasive method for monitoring brain function. In one study of pts with AHF, the absence of the N70 wave, a delayed cortical potential, was found to correlate with death or emergency liver transplantation (ELT). The aims of the present study were to assess the prognostic values of the N20 and N70 waves latencies of the median nerve SSEPs in pts with AHF.

Eighty bilateral median nerve SSEPs were recorded in 19 pts (20 ears; 16-74 yrs) when all of them had prothrombin ratio < 50% and all of them, but 5, clinical encephalopathy. No sedative drug was given. The cause of AHF was viral hepatitis (21 pts), drug-induced hepatitis (9 pts), autoimmune hepatitis (4 pts), Reyes syndrome (2 pts) and miscellaneous (3 pts). According to their outcome, the patients were allocated in 3 groups: 1) asymptomatic recovery (12 pts); ii) ELT, 13 pts); and III (death without ELT, 14 pts). Among these 3 groups, SSEPs waves were evaluated on the initial record (99 pts; subgroups Ia, Ib and Ila), on the first record when the Glasgow coma score (GCS) was < 12 (27 pts; subgroups Ib, IIb and IIIb) and on the second record obtained within 24 to 60 hours after the initial one (15 pts; subgroups Ic and IIc/IIIc). In each subgroup, the mean (±SD) latency (ms) of the N20 and N70 waves was calculated. Values obtained in normal subjects were used as controls.

With regard to the N20 wave latency, mean values (normal in subgroups Ia, IIb, c; Ib, IIIb) were prolonged (p<0.001) in subgroups Ib, Ila, IIa and IIc/IIIc, but overlap of individual values between the subgroups was frequent. The N70 wave mean latency was prolonged (p<0.001) in the 3 subgroups, but did not differ significantly between subgroups Ia, IIa and IIc/IIIc, between subgroups Ib and Ila, and between subgroups Ib, IIIb and IIc/IIIc. Finally, the N70 wave was lacking on at least one SSEPs record in 5 pts with the GCS < 12; among them, 3 died and 2 were transplanted.

We conclude that, in pts with AHF and GCS < 12, (a) prolonged N20 wave latency is often associated with the absence of survived without ELT, but not with a limited individual prognostic value; (b) prolonged N70 wave latency has no prognostic value, but the absence of this wave is associated with a poor outcome. Thus, median nerve SSEPs afford few additional information to improve early prognostic evaluation in pts with AHF.