

O1116 Prognostic factors for evolution in viral encephalitis

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Background: Specific etiologies and risk factors for severe evolution remain largely unknown in acute viral encephalitis.

Materials/methods: A prospective study was conducted in a tertiary infectious diseases hospital from January 2014 to December 2016, which included patients hospitalized with viral encephalitis in order to identify the prognostic factors associated with severe evolution.

Results: There were 149 patients diagnosed with viral encephalitis, 27 (18.1%) died. The median age of those with fatal evolution was significantly higher than that of survivors (63 vs 18 years, $p < 0.001$). The etiology was confirmed in 51 (34.2%) cases: West Nile virus (WNV) – 19 cases, herpesviruses – 17, influenza viruses – 13 and enteroviruses – 2. Progression to death was more frequent for infections with WNV (36.8% mortality rate) and herpesviruses (35.3% mortality rate). Deceased patients had clinical forms of encephalitis (51.9%) or meningo-encephalitis (48.1%). In addition to the age and etiology, predictive signs and symptoms for an unfavorable prognosis were coma (55.6% vs. 10.6%), obtundation (55.6% vs. 18.8%) and confusional status (63% vs. 40.9%). In an univariate analysis, CSF characteristics (high levels of albumin and glucose, low cell counts) and blood tests (elevated ESR, CRP, creatinine, ALT, serum glucose) were also associated with death risk.

In a multivariate analysis using logistic regression, coma (Wald test = 7.127, $p = 0.004$), elevated albumin value in CSF (Wald test = 5.109, $p = 0.024$), creatinine (Wald test = 5.935, $p = 0.015$), serum glucose (Wald test = 3.943, $p = 0.047$) were independent predictive factors for progression to death.

Conclusions: Viral encephalitis continues to be an important cause of mortality, the prognosis being influenced by age and etiology. Clinical manifestations (coma, obtundation, confusional status) and laboratory data (CSF proteins, creatinine, and serum glucose) are predictors of severity.

Variables (149 patients)	Deaths, n=27	Survivors, n=122	P significant <0,05
Age median years (IQR)	63(44.00-76.00)	18(10.00-49.00)	<0.001
WNV, n(%)	7(25.9%)	12(9.8%)	<0.001
Herpesviruses, n(%)	6(22.2%)	11(9.0%)	0.003
Coma, n(%)	15(55.6%)	13(10.6%)	<0.001
Obtundation, n(%)	15(55.6%)	23(18.8%)	<0.001
Confusion, n(%)	17(63%)	50(40.9%)	<0.001
CSF albumin, g/l, average (95%CI)	0.87(0.32-1.04)	0.6(0.38-0.73)	<0.001
Creatinine, mg/dl, average (95%CI)	1.37(0.89-1.83)	0.85(0.71-0.89)	<0.001

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