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ABSTRACT #72

I.E.L.S.G. PROGNOSTIC SCORE FOR PRIMARY CENTRAL NERVOUS SYSTEM LYMPHOMAS (PCNSL): ANALYSIS OF AN INTERNATIONAL SERIES OF 378 IMMUNOCOMPETENT PATIENTS

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PURPOSE Reliable prognostic factors in PCNSL, apart from age and PS, have not been consistently defined. An international series of 378 immunocompetent patients was reviewed to identify survival predictors and to design a prognostic score useful to distinguishing risk groups.

METHODS Median age was 61 ys (12-85); ECOG-PS $>1=$ 222 (65%). High LDH serum level in 69/195 (36%), ocular involvement in 22/170 (13%), meningeal spread in 38/241 (16%), elevated CSF protein concentration in 82/134 (61%), involvement of deep structures of the brain (periventricular regions, basal ganglia, stem brain, and/or cerebellum) in 136 (36%) cases. Treatment was chemotherapy (CHT) in 32 (8%) cases, radiotherapy (RT) in 98 (26%), RT-CHT in 36 (9%), CHT-RT in 197 (53%), none in 7 (2%), data were not available in 8 (2%).

RESULTS Age ≤ 60 ys (2-yr OS: $46\pm 3\%$ vs. $29\pm 3\%$, log-rank test, $p=0.00006$), PS <2 ($50\pm 5\%$ vs. $31\pm 3\%$; $p=0.00001$), normal LDH serum level ($49\pm 4\%$ vs. $29\pm 5\%$; $p=0.008$), normal CSF protein level ($61\pm 7\%$ vs. $39\pm 5\%$; $p=0.003$), and absence of involvement of deep regions of the brain ($42\pm 3\%$ vs. $28\pm 4\%$; $p=0.0006$) were significantly and independently (Cox analysis) associated with a better outcome. These 5 variables were used to design a prognostic score, considering "0" the favorable feature and "1" the unfavorable one and summing the 5 results. This score was tested in 105 assessable patients for whom complete data of all the 5 variables were available. The 2-yr OS was $80\pm 8\%$, $48\pm 7\%$ and $15\pm 7\%$ ($p=0.00001$), respectively for patients with 0-1, 2-3 and 4-5 unfavorable features. This prognostic score was tested separately on the subset of 75 assessable patients treated with HD-MTX-based CHT \pm RT achieving similar results, with a 2-yr OS of $85\pm 8\%$, $57\pm 8\%$ and $24\pm 11\%$ ($p=0.0004$), respectively for patients with 0-1, 2-3 and 4-5 unfavorable features.

CONCLUSIONS Age, PS, LDH serum level, CSF protein concentration, and involvement of deep structures of the brain were independent predictors of survival. The combined analysis of these 5 variables resulted in a prognostic score useful to distinguishing different risk groups, even in patients treated with HD-MTX-based CHT \pm RT. The independent role of these 5 variables and the clinical relevance of the proposed prognostic score deserve to be assessed in further studies. This score could become useful in stratifying patients and comparing results in future prospective trials.