Abstract POSTERS

☐ The utility of molecular PCR assay to detect clonal rearrangement in immunoglobulin VDJ-region genes in cerebro-spinal fluid samples of suspected lymphoproliferative diseases

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Objectives. PCR assay to detect clonal rearrangement in immunoglobulin VDJ-region genes is a diagnostic tool in central nervous system lymphoproliferative diseases[1,2], but its clinical significance has not been stated yet.
Methods. We retrospectively collected 65 subjects with initial suspect of lymphoproliferative disease who performed standardized PCR assays in CerebroSpinal Fluid (CSF) samples. Monoclonal, oligoclonal or polyclonal rearrangement patterns were matched to brain biopsy results or, if not obtainable, to clinical-radiologically-driven final diagnoses (lymphoproliferative disease or others).
Results. Lymphoproliferative disease was proposed in 18/65 patients (27.7%); 8 (44.4%) had a monoclonal pattern. Histological data were available in 25 subjects: 11 evidenced lymphoproliferative disease (44%), related to monoclonality in 54.5%. Statistical significance ($\chi^2$5.275; $p < 0.02$; OR 3.90) was only when both histological and clinical-radiological diagnosis were considered.
Discussion. In our study most of histologically confirmed lymphoproliferative diseases actually showed a monoclonal pattern in respect to oligoclonal or polyclonal ones. Moreover, monoclonality was significantly associated with lymphoproliferative than to other diseases, even basing on pre-biopsy data.
Conclusions. PCR assay is useful to detect clonal population in CSF of suspicious lymphoproliferative diseases, enforcing indication to invasive procedures and allowing specific therapeutic approach if histological evaluation is not feasible or inconclusive.

References

1. Baehring JM, Hochberg FH, Betensky RA, Longtine J, Sklar J. Immunoglobulin gene rearrangement analysis in cerebrospinal fluid of patients with lymphoproliferative processes. J Neurol Sci 2006; 247 (2): 208-216.
2. Scott BJ, Douglas VC, Tihan T, Rubenstein JL, Josephson SA. A systematic approach to the diagnosis of suspected central nervous system lymphoma. JAMA Neurol 2013; 70 (3): 311-319.

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LVII Congresso Nazionale SNO, 24-26 maggio 2017, Napoli.
Atti a cura di Massimo de Bellis e Bruno Zanotti.

ISBN: 978-88-8041-115-4