Atlas of Genetics and Cytogenetics in Oncology and Haematology

OPEN ACCESS JOURNAL AT INIST-CNRS

Leukaemia Section

Short Communication

Immunoblastic lymphoma

Antonio Cuneo, Gian Matteo Rigolin, Francesco Cavazzini

Hematology Section, Department of Biomedical Sciences, University of Ferrara, Corso Giovecca 203, Ferrara, Italy (AC, GMR, FC)

Published in Atlas Database: July 2010

Online updated version : http://AtlasGeneticsOncology.org/Anomalies/ImmunoLymphoID2092.html
DOI: 10.4267/2042/45003

Clinics and pathology

Disease

Immunoblastic lymphoma is one of 3 morphologic variants of diffuse large B cell lymphoma (DLBCL). The other 2 variants are centroblastic lymphoma and anaplastic B-cell lymphoma.
The disease is not recognized as a separate entity in the WHO classification (2008).

Phenotype/cell stem origin

The postulated normal counterpart is a germinal centre B cell or an activated post germinal centre B cell.
The immunophenotype may help distinguishing germinal centre-derived DLBCL from activated B-cell derived DLBCL, the former being CD10+ (>30% of the cells), or BCL6+ and IRF4/MUM1-.
The immunophenotype reproduces that of DLBCL, with pan B-cell markers positive, surface and/or cytoplasmic Ig positive in the majority of the cases. The CD30 antigen is negative. CD5 is positive in 10% of the cases. CD10 is expressed in approximately half of the cases.

Epidemiology

It accounts for approximately 1/4 of DLBCL.

Clinics

The disease runs an aggressive course, as all DLBCL.

Pathology

The lymph node section shows an overwhelming infiltrate (>90%) by medium-to-large size cells with centrally located nucleolus and fairly abundant basophilic cytoplasm.

Treatment

Chemoimmunotherapy using anti CD20 monoclonal antibody rituximab in combination with CHOP or CHOP-like regimens is the standard of care.

Prognosis

Chemoimmunotherapy may cure 40-60% of the cases depending on age and risk factors.

Cytogenetics

Cytogenetics molecular

Because the distinction from other morphologic variants of DLBCL is not reproducible it is generally accepted that there are not distinctive cytogenetic or molecular features with respect to diffuse large B-cell lymphoma.
However, some authors described a more frequent occurrence of losses of the whole chromosome 10, deletions in 8q and 14q, as well as structural abnormalities of 4q in immunoblastic lymphoma than in other morphologic variants of DLBCL (Schlegelberger et al., 1999).

References

Schlegelberger B, Zwingers T, Harder L, Nowotny H, Siebert R, Vesely M, Bartels H, Sonnen R, Hopfinger G, Nader A, Ott G, Müller-Hermelink K, Feller A, Heinz R. Clinicopathogenetic significance of chromosomal abnormalities in patients with blastic peripheral B-cell lymphoma. Kiel-Wien-Lymphoma Study Group. Blood. 1999 Nov 1;94(9):3114-20

Stein H, Warnke RA, Chan WC, Jaffe ES, Chan JKC, Gatter KC, Campo E.. Diffuse large B-cell lymphoma, not otherwise specified. Swerdlow SH, Campo E, Harris NL, Jaffe ES, Pileri SA, Stein H, Thiele J, Vardiman JW, ed.

WHO Classification of Tumours of Haematopoietic and Lymphoid Tissues. WHO press, 4th ed. Lyon: IARC. 2008; 233-237.

This article should be referenced as such:

Cuneo A, Rigolin GM, Cavazzini F. Immunoblastic lymphoma. Atlas Genet Cytogenet Oncol Haematol. 2011; 15(4):356-357.