M0 acute non lymphocytic leukemia (M0-ANLL)

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Identity

Alias
Minimally differentiated acute leukemia

Note
Stazi's criteria:
- 30% blast cells in the bone marrow with <50% erythroblasts.
- Cytochemical staining MPO/SSB <3% of blasts.
- Cytochemical staining for PAS, AcP and NSE negative or weak.
- At least one of these three immunologic markers positive: MPO, CD13, CD33, in flow cytometry or ultrastructurally.
- Absence of cCD3, cCD22 and cCD79a.

Clinics and pathology

Epidemiology
Rare: 3-5 % of ANLL; med age 45 yrs; 20% are children; unbalanced sex ratio in the adults: 1.6 M/1F, p<0.01.

Clinics
High WBC mostly in children; frequently low Hb and platelets; organomegaly in children.

Cytology
Undifferentiated blasts, cytochemistry: negative for myeloperoxidase. Positivity of at least one myeloid marker (CD13, CD33, CD65, CD117-c-KIT). Frequent expression of early progenitor markers CD34, DR; TdT in 30-40% of the cases; CD7 expression frequent in children. MPO antigen identified in about 50% of the cases.

Prognosis
Poor: CR in 50% of cases, med survival: 8 mths. Poor prognosis factors: older age, high WBC, low platelets, CD10, CD14, CD15.

Cytogenetics

Cytogenetics morphological
High percentage of complex (20%) and unbalanced karyotypes; partial or complete monosomy 5/del(5q), -7/del(7q), or rearrangements of chromosome 5 and/or 7 in 15-20%; chromosome 11 rearrangements (11q23 in particular), and chromosome 8 involvement (+8) in 10-15%; chromosome 13 involvement (+13) in 9%; t(9;22)(q34.q11) in 5%; near-tetraploidy in 6%; normal karyotype in 25%.

References


This article should be referenced as such: