

604

ACUTE MYELOID LEUKEMIA

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Neoplastic Accumulation of Blast (Myeloid) > 20%.

- proliferation resulting in the accumulation of immature myeloblasts in the marrow.

TYPES: → Based on genetic Abnormality (cytogenetic Abnormality)

- Based on differentiation
 - Acute basophilic leukemia
 - Acute erythroid leukemia
 - Acute monocytic leukemia
 - Acute megakaryocytic leukemia

Based on genetic Abnormality:

→ Acute promyelocytic leukemia (M3)

→ cytogenetic Ab → t(15:17)

Disruption of Retinoic Acid X Receptor
(Damaged) precursor cell.

↓
all not getting matured

↓
(Blast)

Leukos:

Promyelat punched out Nucleus

+ve Auer Rods cells. (maxim seen in this type)

↓
They leak into Blood stream causing.

↓
"PIL"

t/t → "APRA" → All trans Retinoic Acid

CLINICAL FEATURES IN GENERAL

Age → more common in Adults

Onset → Abrupt

Symptoms

B.H findings

→ Anemia, Neutropenia, Thrombocytopenia,

- Bone Marrow Tendencies
- Biological lymphocytes (H4, H5) → enrichment of genes of stem
- Hypersplenomegaly.

LAB. FINDINGS

WBC ↑

Hb ↓

P.S. → N.M. of Anemias

WBC ↑

> 20% Myeloid blasts

Medium to large size, round

High CR ratio

Rough, irregular nuclei

peroxidase +ve, SPS

Auer Rods (Myeloperoxidase crystallization)

Slender eosinophilic, needle like, peroxidase +ve structures

in cytoplasm of myeloblast (H2, H3)

Sp. B.M

→ Hypocellular

→ Erythropoiesis ↓

→ Myeloblasts → Myeloblasts mature

STAINS for AML

HPO - TV, SBB, PAS → "ASTA" → 1/1

Immunophenotype

markers → CD13, CD15, CD33, CD34

CD117, CD123

CD138

CD138

in myeloblasts