

Acute lymphoblastic leukaemia and its mimickers

The diagnosis of acute lymphoblastic leukaemia (ALL) has moved beyond morphology into immunophenotypic categorization, based on presumed normal counterparts of leukaemic cells with respect to B-cell and T-cell ontogeny. Moreover, it is now well known that cytogenetic changes in ALL are of important prognostic significance. For example, while hyperdiploidy > 50 chromosomes and *TEL-AML1* gene fusion are associated with a good prognosis, the presence of Ph chromosome especially in adult ALL predicts for a dismal outcome and would warrant early consideration of allogeneic bone marrow transplantation as curative measure. The availability of phenotypic and genetic markers of prognosis renders the strategy of risk adaptive therapy feasible.

Some illustrative case studies of ALL will be presented. It should however be borne in mind that certain haemic and non-haemic malignancies may present in such a way that resemble ALL. Notable examples include malignant lymphoma in leukaemic phase and disseminated small round cell tumours particularly neuroblastoma. Finally, lymphoid progenitors cells in reactive conditions, so-called haematogones, may be mistaken as lymphoblasts to the unwary. In case of doubt, careful morphological examination and immunophenotyping, coupled with adequate clinical vigilance is needed for a correct diagnosis to be made.