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SOMPET SANGKACHAI : CORRELATION BETWEEN
CYTOCHEMICAL AND BIOCHEMICAL MARKERS IN ACUTE
LEUKEMIA. THESIS ADVISOR : SIRIPORN KUPTAMETHI,
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The present study was undertaken to determine the correlation between biochemically assayed serum muramidase as well as serum LDH levels and the routine cytochemical markers including MPO, SBB, CE and PAS in acute leukemic patients. The subjects studied included 50 normals (male 16, female 34) and 96 pretreated acute leukemic patients (male 55, female 41) comprising 29 ALL, 12 M1, 14 M2, 17 M3, 11 M4, 11 M5 and 2 M6. The serum muramidase level was assayed by the turbidimetric method of Morsky with some modifications, whereas the serum level of LDH and other biochemical parameters were automatically determined by using Hitachi model 705.

No significant correlation were found between cytochemical and biochemical markers in acute leukemias. Our data revealed subnormal serum muramidase levels in ALL; variable levels in M1, M2 and M3 ; moderately elevated levels in M4 and markedly elevated levels in M5 patients. The acute leukemic patients also had other biochemical changes including elevated serum levels of LDH, AST, ALT and ALP as well as hypoalbuminemia. However, statistically significant differences in some biochemical parameters were found between ALL and AML subtypes ($p < 0.05$). It is suggested that the pretreatment serum muramidase assay may be valuable as a supplementary test adjuncts to morphology and cytochemistry in establishing a diagnosis of acute leukemias.