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APPLICATION OF AUTOMATED FLOW CYTOCHEMISTRY AND
MANUAL CYTOCHEMISTRY IN ANALYSIS OF LYMPH NODE
BIOPSIES IN PATIENTS WITH LYMPHADENOPATHIES

BY

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ABSTRACT

A new technique of determining cell suspension from lymph node by using Hemalog D (automated flow cytochemistry) was developed. Hemalog D and manual cytochemical data of 42 patients with lymphadenopathies were evaluated. Increase percentage of LUC (more than 9.7%) were found in all patients with all types of non-Hodgkin's lymphoma. However 4 out of 10 patients with metastatic carcinoma and 1 out of 21 patients with non-neoplastic lymphadenopathy had percentage of LUC greater than 9.7%. Only one patient in the group of non-neoplasm who had angioimmunoblastic lymphadenopathy had 17.1% LUC. High percentage of LUC in this case related to the increasing number of immunoblasts in lymph node which is identified morphologically and cytochemically as PAS-positive cells.

Higher percentage of monocyte (>5%) was consistently found in all patients with metastatic carcinoma where the cases with non-Hodgkin's lymphoma and non-neoplastic lymphadenopathy had percentage of monocyte less than 5%.

Cytochemical profile can be used to discriminate three groups of lymphadenopathies with high percentage of LUC as follows :-

(i) Lymphoma cells in non-Hodgkin's lymphoma are all negative to PAS, acid phosphatase, non-specific esterase and specific esterase stainings.

(ii) Tumor cells in metastatic carcinoma showed positive activity in PAS, acid phosphatase and non-specific esterase staining.

(iii) Immunoblasts in angioimmunoblastic lymphadenopathy only showed positive activity in PAS staining.

Hemalog D data for classification of subtypes of non-Hodgkin's lymphoma were summarized as follows :-

(i) Histiocytic type had very high %LUC ranging from 20.4 - 38.0%, lower %L, higher %N and higher %HPX.

(ii) Mixed histiocytic-lymphocytic type and poorly differentiated lymphocytic type had %LUC lower than histiocytic type ranging from 9.7 - 18.2%, higher %L, lower %N and lower %HPX.