SUMMARY

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Normal human monocytes and macrophages as well as leukaemic promyelocytes generate potent procoagulant activity PCA resembling thromboplastin.

We have studied the procoagulant activity of mononuclear cells in 87, leukaemic and lymphoma patients (acute lymphoblastic, (22 cases), chronic lymphatic (20 cases), myeloid & AML (M3) (22 cases) lymphoma (23 cases), and we compared them to normal control (20 persons), in order to find a possible differentiating diagnostic parameter. These patients were 30 males and 57 females, with an age range of 3-57 years before initiating any treatment. The cases studied were classified according to the FAB classification.

Peripheral mononuclear cells were obtained from heparinized blood of the patients and layered over Ficoll-Hypaque density gradient.

The procoagulant activity (PCA) was performed using a one-stage clotting time assay system at 37 C.

The highest procoagulant activity was presented by the (M3) group in all dilutions tested when compared to control group. On the other hand all other AML cases showed a non significant reduction in their (PCA) in all

dilutions when compared to control group. The (CLL) cases showed a persistent, highly significant reduction in PCA in low dilution of cells, the reduction was of lesser significance in high dilutions. The lymphoma group showed non statistical significant reduction in all dilutions. The curve showed a unique shape characterised by sudden drop compared to that of normal.

In (ALL) cases (LI, L2, L3), they showed non statistical significant reduction except in high dilutions that showed significant reduction.

In case of ALL (L1) it showed persistent significant reduction in all dilutions, on the other hand, in case of ALL (L2) alone it showed non statistical significant reduction in all dilution.

In conclusion, it was obvious that:

Chronic lymphatic leukaemia (CLL) and (ALL—L1) had impaired production of (PCA) and this explained the decreased thrombotic and hemorhagic complications in these two cases.

The charactteristic curve presented by the lymphoma patients could be used as an additional diagnostic parameter to discriminate between lymphocytic lymphoma versus (CLL) and also distuiguish the leukaemic phase of lymphosarcoma from (ALL—L1) cases only but not (ALL—L2).

The procoagulant activity (PCA) in M3 (promyelocYtic
leukaemia) could be differentiated from (PCA) other types
of (AML).

The procoagulant activity (PCA) determination curve
by serial dilutions could be used as an additional
discrimination point between acute myeloid leukaemia
(AML) and acute lymphoblastic leukaemia. (ALL-L1) only.