THE DIFFERENTIATION OF CELLS IN PLEURAL EFFUSIONS

BY

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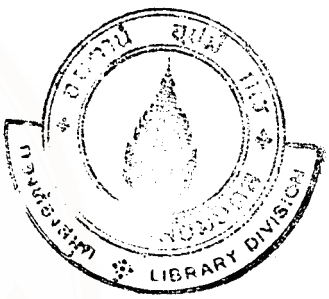

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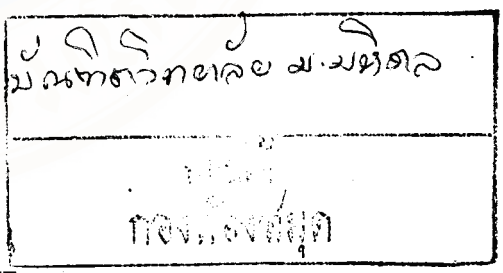

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ABSTRACT

Ninety-two pleural effusions from 81 patients suffered from cancer, lymphoma, tuberculosis and other non-malignant diseases were studied by manual and automated (Hemalog D system) cytochemical methods. Malignant cells in cancerous effusions were absolutely distinctive from mesothelial cells and macrophages by their positivity with β-glucuronidase staining with tartaric acid resistance.

Tuberculous effusions could be ruled out when T-lymphocytes which performed by acid α-naphthyl acetate esterase staining were lower than 12 %.

The percentages of large unstained cells (LUC) from automated cytochemistry was helpful in differential diagnosis of diseases. All lymphomatous effusions contained more than 3 % LUC while all other non-malignant effusions contained less than 3 % LUC. Tuberculous and cancerous effusions showed some overlapsation in the % LUC. However, cancerous effusions were suspected when the print out data from Hemalog D system showed more than 3 % LUC together with more than 12 % monocytes.

The cytochemical method showed highest accuracy (81.5 %) comparing to cytological (77.1 %) and automated cytochemical methods (68.0 %).