

Thesis Title : Serum Lipoprotein and Lipid Profiles
in Experimental Fatty Liver of
Various Etiology

Name : Jitthavil Thongsopit

Degree : Master of Science (Pathobiology)

Thesis Supervisory Committee :

Associate Professor Dr. Tongtavuch Anukarahanonta

Assistant Professor Kulnaree Sirisali

Associate Professor Dr. Apichati Vichayanrat

Date of Graduation : March 24, 1988

ABSTRACT

The study was aimed at the verification of correlation between fatty liver induced by various conditions or agents and patterns of lipoproteins and lipid profiles in serum. The serum was taken for the analysis of total protein, lipid profiles by enzymatic method and serum proteins, lipoproteins and lipoprotein cholesterol by electrophoresis. The data was correlated among the experimental model. The results revealed that visible morphological alterations were similar in all groups studied. However, microscopical changes showed variation in size and localization of the fat droplets in cell fatty livers. Regarding serum protein electrophoresis patterns, the albumin were decrease in animals received hepatotoxics. The serum triglyceride and cholesterol levels were elevated

in acute ethanol treated rats and high fat fed rats whereas the reduction was observed in carbon tetrachloride treated rats. In lipoprotein electrophoresis, VLDL fraction was increase in acute ethanol treated rats and high sucrose fed rats and decrease in carbon tetrachloride treated rats. LCAT activity was found decrease in all experimental group except high fat fed rats and the lipoprotein cholesterol patterns were altered accordingly. In hepatotoxin treated groups, HDL and LDL cholesterol were decrease whereas VLDL-cholesterol was elevated. With respect to dietary effect, VLDL and LDL cholesterol were elevated in high fat fed group but VLDL-cholesterol was increased in high sucrose fed group.

Ratio of VLDL- cholesterol to HDL-cholesterol were consistency higher than control group in all rats with fatty liver except that induced by carbon tetrachloride.