

Thesis Title            High Performance Liquid Chromatographic Deter-  
mination of Conjugated Bile Acids in Various  
Types of Gallstone Bile  
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#### ABSTRACT

Fifty-five-gallstone bile from patients with four types of gallstone were determined for patterns and concentration of total and conjugated bile acids by using high pressure liquid chromatography. (pigment stone 18 cases, cholesterol stone 17 cases, combined stone 15 cases and acalculus cholecystitis 5 cases). The concentration of total bile acids in pigment stone cholesterol stone and combined stone were significantly lower than in normal subjects ( $133.24 \pm 73.76$ ,  $116.43 \pm 60.30$ ,  $126.10 \pm 73.84$  and  $200.0 \pm 45.9$  mmol/l respectively,  $p < 0.05$ ). Conjugated bile acids especially glycocholic acid in all types of gallstone were significantly lower than in normal group ( $p < 0.05$ ). The level of glycodeoxycholic acid in acalculus cholecystitis was also significantly lower than in normal subjects ( $8.32 \pm 7.29$  and  $28.9 \pm 24.9$  mmol/l,  $p < 0.05$ ). In addition the concentration of total and conjugated bilirubin in pigment stone ( $85.0 \pm 29.4$  and  $48.4 \pm 13.2$  mg/dl) were significantly higher than

cholesterol stone ( $54.6 \pm 12.4$  and  $30.8 \pm 3.8$  mg/dl,  $p < 0.05$ ). The results of this study indicates that patients with gallstones had lower level of conjugated bile acids than normal subjects, the increased free bilirubin in bile might increased in bile pigment precipitation which caused gallstone formation.