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Appropriateness of liver biopsy for Nonalcoholic fatty liver disease during laparoscopic cholecystectomy for gallstone disease

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Introduction : Obesity is well known as a risk factor for gallstone disease and is also a risk factor for fatty liver. Although, liver biopsy is particularly useful in patients without definite clinical manifestations, liver biopsy is invasive and is not recommended except in special case. However, hepatic biopsy is not a relatively risky procedure during laparoscopic cholecystectomy. Therefore, we investigated the clinical characteristics in biopsy proven non-alcoholic fatty liver disease and non-alcoholic steatohepatitis in gallstone disease patients during laparoscopic cholecystectomy for gallstone disease

Methods : We retrospectively reviewed 288 medical records with gallstone disease who underwent laparoscopic cholecystectomy with liver biopsy from 2006 to 2017. Univariate and multivariate logistic regression were performed to evaluate the association between clinical factors and fatty liver.

Results : Ninety-six (33.3%) patients were diagnosed as fatty liver. Mean BMI of the patients was 24.5 kg/m2. (24.1-25.0) In univariate analysis, 6 clinical factors involved the fatty liver: BMI, Hb, ALP, AST, DM, and Liver disease. However, 4 clinical factors were involved in the multivariate logistic regression model. (BMI: OR=1.210 (1.111-1.318), p<0.001; ALP: OR=0.991 (0.984-0.998), p=0.018; DM: OR=2.618 (1.135-6.204), p=0.024; and Liver disease: OR=2.193 (1.667-3.049), p<0.001).

Conclusions : The liver biopsy could be recommended in high BMI patients with DM or Liver diseases.

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