

E-042

## Carcinoembryonic Antigen As A Novel And Practical Predictors Of Incidental Gallbladder Cancer Hidden In Acute Cholecystitis

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**Background** : Incidental gallbladder cancer (iGBC) detected after cholecystectomy is not uncommon, however preoperative predictors of iGBC have been poorly defined. Especially, in patients with acute cholecystitis (AC), it is difficult to identify the presence of iGBC with preoperative imaging due to inflammation. This study aimed to identify the preoperative non-imaging predictors of iGBC hidden in AC.

**Methods** : This single-center, retrospective study included 2466 patients who underwent laparoscopic cholecystectomy for AC between January 2010 and December 2022. Patients with preoperative image findings suggestive of gallbladder cancer, such as irregular thickening or masses in the gallbladder wall, were excluded. Receiver operating characteristic (ROC) curve analyses and Cox proportional hazard regression model were used to identify the predictors of iGBC.

**Results** : Of 2466 patients (mean age, 62.7 years; 1053 [42.7%] women), 36 (1.5%) were diagnosed with iGBC after cholecystectomy. In ROC curve analyses, age (area under the curve [AUC] 0.725; 95% confidence interval [CI] 0.657-0.792, p <0.001) and carcinoembryonic antigen (CEA) (AUC 0.644; 95% CI 0.517-0.772, p = 0.027) showed a significant correlation with iGBC. The cutoff values were calculated as 66.5 years and 3.435 ng/mL, respectively based on Youden index. In multivariate analysis, age  $\geq$  67 years and CEA  $\geq$  3.44 ng/mL were statistically significant predictors of iGBC.

**Conclusions** : This study demonstrated that CEA is a novel and practical predictor of iGBC in patients with AC. Routine preoperative CEA may be considered for the prediction of iGBC in elderly patients with AC.

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