

BP OP 1-3**Diagnostic Value of Serum Tumor Markers (Carcinoembryonic Antigen and Carbohydrate Antigen 19-9) in Gallbladder Cancer**

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Introduction : There are few studies currently available analyzing the diagnostic value of serum tumor markers, such as carcinoembryonic antigen (CEA), carbohydrate antigen (CA) 19-9 in gallbladder cancer (GBC). The aim of this study is to evaluate the diagnostic value of CEA and CA19-9 in GBC patients and access the correlation between serum tumor markers and cancer staging.

Methods : The medical records of all patients who were pathologic diagnosed as GBC between January 1988 and December 2017 in Seoul National University Hospital were retrospectively reviewed. Preoperative serum tumor markers were compared between GBC and age, sex-matched benign gallbladder disease. In GBC patients, further analysis about diagnostic accuracy was performed according to the stage.

Results : Total 754 GBC patients and 1100 control were enrolled. The mean of tumor marker was elevated in GBC compared to control group (15.9 ug/L vs 1.2 ug/L, $p=0.029$ for CEA, 659.2 U/mL vs 13.3 U/mL, $p=0.002$ for CA19-9). The diagnostic accuracy was 66.1% for CEA, and 73.1% for CA19-9. Serum CEA and CA19-9 were significantly correlated with depth of invasion ($p<0.001$), nodal involvement ($p<0.001$). In the analysis to distinguish between early and advanced GBC, the sensitivity and specificity of were 56.4% and 57.9%, respectively, for CEA; 67.5% and 66.4%, for CA19-9.

Conclusions : Serum CA 19-9 has a diagnostic potential for discriminating advanced stage of GBC, being better diagnostic value than CEA, allowing early management. However, development of new tumor marker is needed since currently used markers are of low diagnostic value in early GBC.

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