

Thesis Title: Attempts to identify tumor-associated antigen(s) in cholangiocarcinoma

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Abstract

Liver cancer is still a major health problem in many Asian-Pacific countries. Of these, cholangiocarcinoma is one of the main types of primary cancers of the liver commonly found in these countries. It is particularly more common in areas where liver fluke infection caused by *Clonorchis sinensis* and *Opisthorchis viverrini* are endemic such as Hong Kong, China, Korea and Thailand. At the present time, there is no specific laboratory test for the early detection of the tumor so patients with cholangiocarcinoma are often diagnosed at the time when the condition is too late to be successfully managed. Much attention has been given to the identification, isolation and characterization of specific tumor marker for this disease and if it turns out to be positive, it will be a

potential candidate that may be developed further for the detection of cholangiocarcinoma at its earliest stage.

In this study, the protein fractions of malignant tissue were compared with the protein fractions of normal tissue by a number of approaches, i.e., protein and glycoprotein stainings of SDS-PAGE, immunoenzymatic reaction with rabbit antibodies to find out the possible presence of specific component that is found only in malignant tissue. The protein and glycoprotein stainings failed to distinguish any difference between malignant and normal tissue. However, when the rabbit antibody against homogenate of cholangiocarcinoma gall-bladder purified by affinity chromatography was used as a specific probe, a specific component with a MW of 46 kD was detected in cholangiocarcinoma tissue and not in a small number of normal tissue available for study. This component was heavily glycosylated and was not organ specific because it could be detected in both intrahepatic portion of bile duct and gall-bladder. A limited data currently available failed to detect the presence of this component in the serum of patients with cholangiocarcinoma.

The limited data presented in this study are encouraging but more definitive data must be obtained before one can make a firm conclusion. The limited number of specimens available at the time of study was a major obstacle. It was not possible to either repeat some of these experiments or to further refine them in such a way that would give a more conclusive result.