Higher Freshwater Fish and Sea Fish Intake Is Inversely Associated with Liver Cancer in Patients with Hepatitis B

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Abstract : Background and aims While the association between higher consumption of fish and lower liver cancer risk has been confirmed, however, the association between specific fish intake and liver cancer risk remains unknown. We aimed to identify the association between specific fish consumption and the risk of liver cancer. Methods: Based on a community-based seropositive hepatitis B cohort involving 18404 individuals, face to face interview was conducted by a standardized questionnaire to acquire baseline information. Three common fish types in this study were analyzed, including freshwater fish, sea fish, and small fish (shrimp, crab, conch, and shell). All participants received liver cancer screening, and possible cases were identified by CT or MRI. Multivariable logistic models were applied to estimate the odds ratio (OR) and 95% confidence intervals (CI). Multivariate multiple imputations were utilized to impute observations with missing values. Results: 179 liver cancer cases were identified. Consumption of freshwater fish and sea fish at least once a week had a strong inverse association with liver cancer risk compared with the lowest intake level, with an adjusted OR of 0.53 (95% CI, 0.38-0.75) and 0.38 (95% CI, 0.19-0.73), respectively. This inverse association was also observed after the imputation. There was no statistically significant association between intake of small fish and liver cancer risk (OR=0.58, 95%, CI 0.32-1.08). Conclusions: Our findings suggest that consumption of freshwater fish and sea fish at least once a week could reduce liver cancer risk.

Keywords: cross-sectional study, fish intake, liver cancer, risk factor

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