Anticoagulant Uses in Cirrhotic Patients in King Chulalongkorn Memorial Hospital

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Background: Although cirrhosis is often associated with thrombocytopenia and coagulopathy, it is not protective from theomboembolism. Anticoagulants are indicated in some of these patients. Since cirrhotic patients may have more complications while taking anticoagulants, a study in this particular group is helpful for a clinical decision to prescribe this medication.

Objective: To compare bleeding side effects and thrombosis during anticoagulant uses in the control group with liver cirrhosis.

Methods: This was a retrospective cohort study. Medical records of warfarin uses in cirrhosis (diagnosis from ultrasonography and liver function tests) were reviewed and compared with the age-matched control group in King Chulalongkorn Memorial Hospital.

Results: There were 102 participants (32 with cirrhosis and 70 without cirrhosis). The age and gender were not different between these 2 groups. In cirrhosis group, there were Child pugh score A in 78.1%, B in 18.8%, and C in 3.1% The prolonged INR and thrombocytopenia were found in 15.6% and 6.3%, respectively. The average follow up time was 5.6 years. In cirrhotic group, the number of major bleeding, clinically relevant non major bleeding (CRNM), and thrombosis were 11 (34.4%), 10 (31.3%), and 3 (9.4%), respectively. While, those of control group were 8 (11.4%), 16 (22.9%), and 7 (10.0%), respectively. The cirrhotic patients had the odds ratio for major bleeding of 4.06 (95% Confidence interval 1.44-11.44, p-value 0.008), CRNM bleeding of 1.53 (95%CI 0.60-3.90, p-value = 0.369), and thrombosis of 0.93 (95%CI 0.22-3.86, p-value = 0.922). In a univariate analysis, the significant predictors of major bleeding were age > 65 years, previous stroke and major bleeding. By a multivariate analysis, cirrhosis was still associated to major bleeding with the odds ratio of 3.71 (95%CI 1.23-11.17, p-value = 0.02).

Conclusion: Warfarin uses in patients with cirrhosis are associated with 3-4 times more major bleeding compared with the control. However, the CRNM bleeding and thrombosis are not significantly different.

Keywords: Anticoagulant, Warfarin, Vitamin K antagonist, Thrombocytopenia, Cirrhosis, High risk bleeding