

The Effect of Fish and Krill Oil on Warfarin Control

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Abstract : Background: Warfarin is an oral anticoagulant widely used in the prevention of strokes in patients with atrial fibrillation (AF) and in the treatment and prevention of deep vein thrombosis (DVT). Regular monitoring of Internationalised Normalised Ratio (INR) is required to ensure therapeutic benefit with time in therapeutic range (TTR) used to measure warfarin control. A number of factors influence TTR including diet, concurrent illness, and drug interactions. Extensive literature exists regarding the effect of conventional medicines on warfarin control, but documented interactions relating to complementary medicines are limited. It has been postulated that fish oil and krill oil supplementation may affect warfarin due to their association with bleeding events. However, to date little is known as to whether fish and krill oil significantly alter the incidence of bleeding with warfarin or impact on warfarin control. Aim: To assess the influence of fish oil and krill oil supplementation on warfarin control in AF and DVT patients by determining the influence of these supplements on TTR and bleeding events. Methods: A retrospective cohort analysis was conducted utilising patient information from a large private pathology practice in Queensland. AF and DVT patients receiving warfarin management by the pathology practice were identified and their TTR calculated using the Rosendaal method. Concurrent medications were analysed and patients taking no other interacting medicines were identified and divided according to users of fish oil and krill oil supplements and those taking no supplements. Study variables included TTR and the incidence of bleeding with exclusion criteria being less than 30 days of treatment with warfarin. Subject characteristics were reported as the mean and standard deviation for continuous data and number and percentages for nominal or categorical data. Data was analysed using GraphPad InStat Version 3 with a p value of <0.05 considered to be statistically significant. Results: Of the 2081 patients assessed for inclusion into this study, a total of 573 warfarin users met the inclusion criteria. Of these, 416 (72.6%) patients were AF patients and 157 (27.4%) DVT patients and overall there were 316 (55.1%) male and 257 (44.9%) female patients. 145 patients were included in the fish oil/krill oil group (supplement) and 428 were included in the control group. The mean TTR of supplement users was 86.9% and for the control group 84.7% with no significant difference between these groups. Control patients experienced 1.6 times the number of minor bleeds per person compared to supplement patients and 1.2 times the number of major bleeds per person. However, this was not statistically significant nor was the comparison between thrombotic events. Conclusion: No significant difference was found between supplement and control patients in terms of mean TTR, the number of bleeds and thrombotic events. Fish oil and krill oil supplements when used concurrently with warfarin do not significantly affect warfarin control as measured by TTR and bleeding incidence.

Keywords : atrial fibrillation, deep vein thrombosis, fish oil, krill oil, warfarin

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