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Study on the Impact of Pharmacist-Managed Anticoagulation Clinic on Extending Time to Follow-up by Physician in Patients Receiving Warfarin (ImPACT-Fu)

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Introduction

Patients receiving warfarin at Queen Mary Hospital undergo standard follow-up with physician in cardiac clinic at a 16-weekly basis and regular INR monitoring every 8 weeks.

Objectives

To study whether extending time to follow-up by physician to every 24 weeks in patients receiving warfarin and providing additional Pharmacist-Managed Anticoagulation Clinic results in patients having non-inferior control of anticoagulation compared to standard follow-up. This collaborative clinic allows physicians to provide consultation on more new warfarin cases referred from other clinics.

Methodology

The study is a prospective, randomized, open-labelled, placebo-controlled non-inferiority trial. Patients were randomized to a 16-weekly physician follow-up (control group) or a 24-weekly physician follow-up with pharmacist intervention (study group).
Patients in the study group received pharmacist consultation to optimize drug therapy. INR was tested at week 0, 8, 16 and 24 and telephone counselling was performed by a pharmacist at week 8 and 16. The pharmacist adjusted the warfarin dosage as required to achieve a therapeutic level of anticoagulation according to predefined protocol, and schedule an appropriate follow-up with patient and any additional INR

tests required.
The primary outcome was the percent time in therapeutic INR range (TTR) and expanded TTR, as calculated by Rosendaal linear interpolation method. The percent time in TTR at week 24 for the study group was compared with that at week 16 for the control group. The secondary outcomes were rates of bleeding, thromboembolic adverse events, percentage of patient with adjusted warfarin dose and patient satisfaction assessed by Patient Satisfaction Questionnaire (PSQ-18).

Result

128 patients (72 in study group, 56 in control group) were recruited from March to November 2016. Mean percent time in TTR for control and pharmacist group was 80.8% (n, 49; SD, 28%) and 88.8% (n, 65; SD, 16.1%) respectively and mean percent in expanded TTR was 88.7% (SD, 13.9%) and 95.9% (SD, 9.6%) respectively. The absolute difference in TTR and expanded TTR of -8 and -7.23 percentage points respectively favoured the pharmacist group with a 1-sided upper 95% confidence bound of 0.92 and -2.86 respectively that were both within the noninferiority margin of 7.5 percentage points. In summary, extending follow-up to every 24 weeks with pharmacist intervention was non-inferior to the usual 16-weekly follow-up in terms of INR control in patients receiving warfarin.