RAPS trial protocol paper

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RAPS (Rivaroxaban in Antiphospholipid Syndrome) protocol: A prospective randomised controlled phase II/III clinical trial of rivaroxaban versus warfarin in patients with thrombotic antiphospholipid syndrome, with or without SLE

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Abstract

Introduction

The current mainstay of the treatment of thrombotic antiphospholipid syndrome (APS) is long-term anticoagulation with vitamin K antagonists (VKA) such as warfarin. Non-VKA oral anticoagulants (NOAC), which include rivaroxaban, have been shown to be effective and safe compared with warfarin for the treatment of venous thromboembolism (VTE) in major phase III prospective randomised controlled trials (RCT), but the results may not be directly generalisable to patients with APS.

Aims

The primary aim is to demonstrate, in patients with APS and previous VTE, with or without systemic lupus erythematosus (SLE), that the intensity of anticoagulation achieved with rivaroxaban is not inferior to that of warfarin. Secondary aims are to compare rates of recurrent thrombosis, bleeding and the quality of life in patients on rivaroxaban with those on warfarin.

Methods

RAPS is a phase II/III prospective non-inferiority RCT in which eligible patients with APS, with or without SLE, who are on warfarin, target International Normalised Ratio (INR) 2.5 for previous VTE, will be randomised either to continue warfarin (standard of care) or to switch to rivaroxaban. Intensity of anticoagulation will be assessed using thrombin generation (TG) testing, with the endogenous thrombin potential (ETP) as the key parameter. The primary outcome is the percentage change in ETP from randomisation to day 42. Markers of *in vivo* coagulation activation, prothrombin fragment 1.2, thrombin antithrombin complex and D-dimer, will also be measured.

Discussion

If RAPS demonstrates that i) that the anticoagulant effect of rivaroxaban is not inferior to that of warfarin using TG testing and ii) the absence of any adverse effects that cause concern with regard to the use of rivaroxaban, this would provide sufficient supporting evidence to make rivaroxaban a standard of care for the treatment of APS patients with previous VTE, requiring a target INR of 2.5.

Trial registration

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