

## Abstract:

Antiphospholipid syndrome is rare disorder characterized by persistent circulating antibodies that can present as either thrombotic or obstetrical events. Exact rates of antiphospholipid syndrome in the general population are unknown given a lack of population-based studies. Data suggests that patients with thrombotic antiphospholipid syndrome are at increased risk for deep vein thrombosis in the lower limbs and cerebral circulations, with a higher risk of recurrent thrombosis compared to the general population.

Following the revisions to the Sapporo criteria, recommendations centered around diagnosis of antiphospholipid syndrome involve at least one clinical event and one laboratory test positive for antibodies associated with antiphospholipid syndrome. Laboratory testing for antiphospholipid syndrome evaluates for the presence of lupus anticoagulant, anti-cardiolipin, and anti-beta<sub>2</sub>-glycoprotein 1. Lupus anticoagulant has been shown to be associated with greatest risk of thrombotic events compared to the two other antibodies.

When patients are diagnosed with thrombotic antiphospholipid syndrome, anticoagulation is often warranted. Current guidelines and data support the utilization of vitamin K antagonist (VKA), targeting an international normalized ration of 2.0 – 3.0. However, with the approval of direct oral anticoagulants (DOACs) and their demonstrated efficacy and safety in the general population for the treatment of thrombosis compared to that of warfarin, their use in antiphospholipid syndrome has been questioned. Several case studies have reported success in the use of DOACs, yet minimal data is available from randomized controlled trials to prove efficacy and safety in this population. With only two RCTs being available for current guidelines to base recommendations off. Guidelines such as the International Society of Thrombosis and Haemostasis recommend against the use of DOACs, favoring VKA as the preferred anticoagulation strategy. However, since the current guidelines have been published, additional data from RCTs have become available as well as a meta-analysis shedding more light on the debate of whether DOACs are efficacious and safe options in antiphospholipid syndrome. Through this presentation, a review of the current literature will take place to help address the question of DOACs in APS and whether warfarin is still the drug of choice.

## Questions:

1. Current guidelines recommend which of the following as first line treatment in thrombotic APS?

- A. Rivaroxaban 15 mg BID
- B. VKA at an INR of 2-3
- C. Apixaban 5 mg BID
- D. Aspirin 81 mg daily

2. Both the TRAPS trial and the trial by Ordi-Ros et al. were terminated early as a result of \_\_\_\_\_?

- A. Increased rates of bleeding associated with VKA
- B. Venous thrombotic events in the VKA group

- C. Increased rates of bleeding associated with rivaroxaban
- D. Arterial events in the rivaroxaban group

3. Data from the meta-analysis comparing DOACs to VKA, supports which of the following statements?

- a. There is no difference between rates of arterial events amongst patients receiving DOACs compared to VKA
- b. Higher rates of major bleeding was statistically significant in patients receiving VKAs versus that of DOACs
- c. There is no difference between rates of venous thrombotic events amongst patients receiving DOACs compared to VKA
- d. Statistically significant higher rates of venous thrombotic events occurred with VKA compared to DOACs

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