The use of novel oral anticoagulants: the debate continues!

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For many years, vitamin K antagonists have been the only oral anticoagulant drugs available for the prevention and treatment of thromboembolic diseases and, thanks to several studies which have consistently documented their high effectiveness, they are still currently used by millions of patients worldwide¹. Vitamin K antagonists do, however, have numerous drawbacks, such as delayed onset and offset of action, a narrow therapeutic window, genetic variations of metabolism and interactions with food and drugs that necessitate frequent monitoring of the International Normalised Ratio and dose adjustments¹-³. To overcome these limitations, a new class of non-vitamin K antagonist oral anticoagulants (NOA) has been developed in the last decade⁴. Two types of NOA are currently available: the factor Xa inhibitors apixaban, rivaroxaban and edoxaban and the thrombin inhibitor dabigatran⁵. In contrast to vitamin K antagonists, which block the formation of multiple active vitamin K-dependent coagulation factors (factors II, VII, IX and X), the NOA block the activity of one single step in coagulation (see Table I for the main characteristics of NOA). The results of several randomised trials and meta-analyses have clearly demonstrated the efficacy of these novel antithrombotic agents in the prevention and treatment of thromboembolism⁴,⁶.

There are currently two different attitudes to the prescription of NOA, a more permissive one according to which NOA are prescribed to the majority of patients with venous thromboembolism with very few exceptions (i.e., patients with severe renal impairment and patients with cancer) and a more restrictive attitude, which suggests particular caution in the use of NOA mainly because of the lack of antidotes and of comparative efficacy long-term studies (against warfarin) and real-world safety data. These different positions are well represented in the two debates published by Prandoni⁷ and Riva and Ageno⁸ in this issue of Blood Transfusion. These papers were presented orally at the last meeting of the Italian Society for the Study of Hemostasis and Thrombosis (SISET) held in Livorno.

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