

Statins reduce risk of VTE

Venous thromboembolism (VTE) is a common problem, but is difficult to diagnose and expensive to treat. Economically viable and safe preventative strategies are, therefore, needed. A large, randomized, controlled trial has demonstrated that rosuvastatin can significantly reduce the occurrence of symptomatic VTE in apparently healthy individuals.

There has been much debate about whether therapies for arterial and venous thrombosis are interchangeable, given that these conditions share risk factors and frequently occur at the same time. Observational and case-control studies have provided conflicting information on whether statins are efficacious in reducing risk of VTE. The JUPITER investigators thus designated the occurrence of VTE as a secondary end point in their trial on the effects of rosuvastatin on rate of first major cardiovascular events.

Apparently healthy individuals were randomly assigned to receive rosuvastatin 20 mg daily ($n = 8,902$) or placebo ($n = 8,902$). During follow-up

(mean 1.9 years), more individuals in the placebo group experienced symptomatic pulmonary embolism or deep-vein thrombosis compared with those who received the statin (60 versus 34). This rosuvastatin effect on risk of VTE was independent of the previously observed effect on arterial events. The estimated numbers needed to treat for 5 years were 18 to prevent the composite end point of death, an episode of VTE or a primary cardiovascular end point, 21 to prevent an episode of VTE or a primary cardiovascular end point, and 25 to prevent a primary cardiovascular end point alone. No difference in bleeding was observed between the two groups.

The JUPITER investigators conclude that “widening the goal of treatment to include prevention of VTE and death, in addition to arterial thrombosis, increases the estimated benefit of statin use”.

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Original article Glynn, R. J. *et al.* A randomized trial of rosuvastatin in the prevention of venous thromboembolism. *N. Engl. J. Med.* **360**, 1851–1861 (2009).