ANTICOAGULATION THERAPY

Target INRs for cardiac indications

A team of researchers from Leiden, the Netherlands, have described optimum target international normalized ratios (INRs) for patients receiving anticoagulation therapy after mechanical heart valve implantation or myocardial infarction, or for atrial fibrillation.

The study involved 4,202 patients who received warfarin therapy for these indications at the Leiden Anticoagulation Clinic between 1994 and 1998. During the 3 years of follow-up, 542 (13%) patients died and 1,774 (42%) were admitted to hospital. In total, 306 events met the primary outcome criteria (major hemorrhage or major thromboembolism). The optimum level of anticoagulation therapy was defined as the INR range that resulted in the lowest incidence of adverse events. Among patients with mechanical heart valve prostheses, the lowest rate of events (2.0 per 100 patient years) occurred

in the INR range of 2.5–2.9. The lowest rate in patient with previous myocardial infarction (1.1 per 100 patient years) occurred at an INR range of 3.5–3.9. Finally, the INR range with the lowest rate of outcome events in patients with atrial fibrillation (2.4 per 100 patient years) was 3.0–3.4. “Our study suggests target INRs of 3.0 for patients with mechanical heart valves or atrial fibrillation and 3.5 after myocardial infarction as a starting point for future clinical trials,” says Frits Rosendaal, who led the study. “We believe the current trend to strive for less intense anticoagulation may not be beneficial.”

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Original article Torn, M. *et al.* Optimal level of oral anticoagulant therapy for the prevention of arterial thrombosis in patients with mechanical heart valve prostheses, atrial fibrillation, or myocardial infarction: a prospective study of 4,202 patients. *Arch. Intern. Med.* **169**, 1203–1209 (2009).