Current Status of Antithrombotic Therapy in Japan

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The management of thrombosis has evolved substantially over recent periods. Advancement of high-tech diagnostic imaging modalities has enabled early diagnosis, and it is now readily recognized that thrombosis and its complications are not uncommon particularly in elderly population. Various preventive measures and treatment options are now introduced. Multiple new antithrombotic agents are now available and we have an ever-expanding therapeutic armamentarium to apply in the most complicated clinical circumstances. Much of the controversy surrounding modern antithrombotic managements is focused on the specific choice of agent(s) or strategy to efficiently use these agent(s).   Based on the underlying pathobiology of thrombosis currently available antithrombotic agents will be thoroughly reviewed: oral anticoagulants, unfractionated heparin, low molecular weight heparin, non-heparin anticoagulants, Xa inhibitors, direct thrombin inhibitors, oral and injectable antiplatelet agents and thrombolytics.   Major recent prevention and treatment guidelines that comprise the current state of knowledge (atrial fibrillation, unstable angina, myocardial infarction, brain infarction, venous thromboembolism) will be thoroughly reviewed, and the near-future new medications, which may well have the potential to further refine antithrombotic treatment and to transform initial and long-term managements, will be discussed. As anyone well knows, there is no perfect antithrombotic regimen for all patients. Antithrombotic therapy to be applied in the "real world" needs to be individualized, and "standard" therapy needs to be supplemented in specific circumstances particularly in selected high-risk patients.   Other important issues such as safety, drug resistance and ethnic differences in bleeding complications will be discussed so that we may contribute importantly to personalized antithrombotic therapy.