Warfarin (Coumadin)

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Synonyms

Blood Thinner; Coumadin®

Definition

Warfarin (trade name Coumadin®) is an oral anticoagulant that is most frequently used to prevent or control thromboembolic disorders such as stroke, myocardial infarction, peripheral artery disease, venous thrombosis, pulmonary embolism, and others.

Current Knowledge

By inactivating the production of Vitamin K-dependent coagulation factors II, VII, IX, and X that help to form blood clots, warfarin makes it more difficult for the system to create a clot. However, as a result of its anticoagulant effect, it also can cause a number of hemorrhagic complications, including gastrointestinal bleeding and

cerebral hemorrhage. In order to insure appropriate anticoagulation effect while minimizing the risk of adverse effects, a simple blood test, the International Normalized Ratio (INR), can be used to measure, monitor, and adjust the anticoagulation level. The ideal target INR level depends on the specific clinical situation, but generally the target range is between 2 and 3. Administration of Vitamin K reverses the anticoagulation effect. Patients treated with warfarin require close monitoring to avoid bleeding, but the drug has been shown to prevent 20 strokes for every bleeding episode that it causes (Horton and Bushwick 1999).

Cross-References

- ▶ Anticoagulation
- ▶ Heparin
- ▶ Thrombosis

References and Readings

- Holbrook, A. M., Pereira, J. A., Labiris, R., et al. (2005). Systematic overview of warfarin and its drug and food interactions. *Archives of Internal Medicine*, 165, 1095–1106.
- Horton, J. D., & Bushwick, B. M. (1999). Warfarin therapy: Evolving strategies in anticoagulation. *American Family Physician*, 59, 635–646.