The Centre for Blood Research

Wednesday, October 24, 2012
12:00 pm
in LSC3

Life Sciences Centre
2350 Health Sciences Mall

Dr. Ken Bauer

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"Direct Thrombin or Factor Xa Inhibition as Antithrombotic Strategies: The Development of New Oral Anticoagulants"

Until recently, vitamin K antagonists (e.g., warfarin) have been the only available oral anticoagulants. These drugs are multi-targeted and have a delayed onset of action, food and drug interactions, and variable pharmacokinetics/pharmacodynamics such that regular laboratory monitoring of coagulation and intermittent dose adjustments are required. There was considerable discussion as to whether targeted inhibition of factor Xa would be an efficacious antithrombotic approach; the development of fondaparinux, a synthetic pentasaccharide that binds to antithrombin and selectively inhibits factor Xa, demonstrated the feasibility of this approach. New anticoagulants with predictable have now been developed that selectively inhibit thrombin or factor Xa. A thrombin inhibitor, dabigatran, and a factor Xa inhibitor, rivaroxaban, have now gained approval in many countries for the prevention and treatment of thrombosis..Unlike warfarin, these drugs have a rapid onset of action, a predictable dose-response relationship, and relatively wide therapeutic range such that coagulation monitoring is not required.

These agents should therefore be more convenient for patients and health care providers with the potential for improving clinical outcomes. The advent of these new agents is leading to major changes in the way that thrombosis is managed, both with respect to prevention and treatment. The new oral inhibitors of thrombin and factor Xa, however, have limitations and the absence of a need for regular laboratory monitoring makes medication compliance extremely important for maintaining efficacy given their relatively short half-lives. Furthermore there will be challenges in managing patients on these agents who develop recurrent thrombosis or major bleeding until methods to monitor and assess the levels of the new agents are readily available and specific antidotes are developed.

This Seminar is sponsored by:

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Host: Dr. Ed Conway, CBR Director, Professor of Medicine, UBC

Refreshments will be served 10 minutes before the seminar
Seminar information: 604 822 7407