



IN SEARCH OF AN IDEAL ANTICOAGULANT AGENT

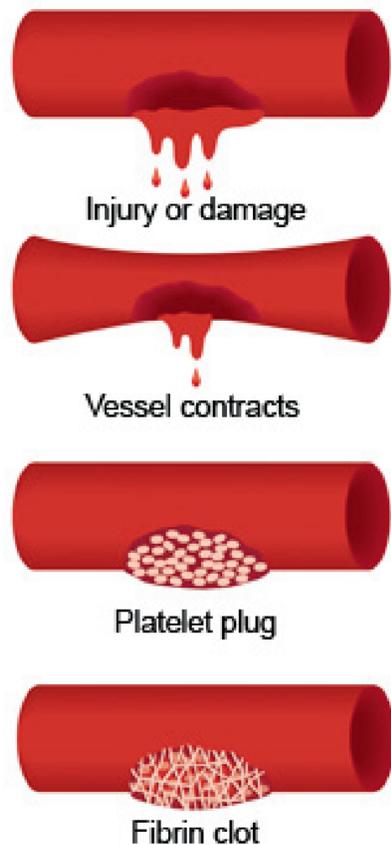


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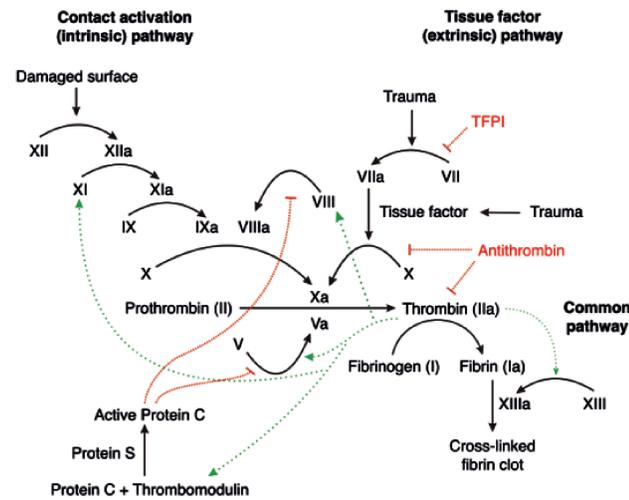
INTRODUCTION

1. GTF spreads awareness of thrombosis in the community
2. There are so many drugs that are available for the management of thrombi
3. Objective of this research was to see if we have reached our ideal anticoagulant agent

THE CLOTTING PROCESS



THE COAGULATION CASCADE



POSSIBLE CONSEQUENCES OF A THROMBUS

1. Clotting is a good and protective mechanism for the body
2. Blood clots can produce harmful effects such as:
 - Deep Vein Thrombosis(DVT)
 - Pulmonary Embolism (PE)
 - Heart Attack (myocardial infarction)
 - Stroke
 - Kidney Failure
 - Problems during pregnancy (miscarriage)

HEPARIN: THE MASTER

1. Heparin, the first anticoagulant, discovered accidentally in 1916 by Jay McLean, a second-year medical student, Department of Physiology, Johns Hopkins Medical School, Baltimore, under the direction of the eminent scientist William Howell
2. October 2016, Heparin Centennial was celebrated all over the World and at Loyola University, in which a few of the GTF members had participated (The Laddu's, Rohil Badkundri)



Jay McLean

ANTICOAGULANTS

TYPES OF ANTICOAGULANTS

1. Oral tablets (Warfarin, Pradaxa)
2. Injectables (Heparin, Low Molecular Weight Heparin)

DIRECT THROMBIN INHIBITORS (DTI)

1. Hirudin
2. Argatroban: A synthetic DTI
3. Dabigatran (Pradaxa)

DIRECT FACTOR Xa INHIBITORS

1. Rivaroxaban (Xarelto)
2. Apixaban (Eliquis):
3. Edoxaban (Savaysa)

HAVE WE REACHED AN IDEAL ANTICOAGULANT, YET?

Criteria	Criteria Met
Onset of action	Yes, Heparin (rapid), and NOAC's * (fast in a few hours)
No food effect	Yes with NOAC's
No Adverse Effects	Not yet
Kidney function be considered before starting	No with warfarin; yes with NOAC's
Action can be easily antagonized	Yes: Heparin (Protamine SO4) Dabigatran (Idarucizumab)
No need for routine lab monitoring	No with warfarin; yes, with NOAC's
Free of drug interactions	No with warfarin; in part with NOAC's
Should lead to a predictable pharmacological effect	Yes, Heparin, Dabigatran
Has a Wide Therapeutic Window	No
Should Be Cost-Effective	Yes, warfarin

* Novel (new) Oral Anticoagulants

CONCLUSIONS

HAVE WE REACHED THE TOP OF THE HIMALAYAS, YET?

1. Our search for an ideal anticoagulant agent is not yet over
2. Our message: Keep on trying, until we succeed

