Tissue factor

The coagulation cascade is a series of reactions involving coagulation factors that ultimately results in the formation of a blood clot. The synthesis of several vitamin K-dependent coagulation factors.

Numerous anticoagulants (NOACs) are now available in the UK in addition to warfarin.

ARRHYTHMIA & ELECTROPHYSIOLOGY REVIEW

Sources:

“Slow rise of NOACs” – NHS Digital;
NICE; “Timeline” – Heatons Hosp.

NEW ORAL ANTICOAGULANTS FOR STROKE PREVENTION IN ATRIAL FIBRILLATION

Around 12,500 strokes are caused by atrial fibrillation (AF) in the UK each year, and 7,100 of these are preventable with appropriate anticoagulation. Four new oral anticoagulants (NOACs) are now available in the UK in addition to warfarin.

DAWN CONNELLY

SLOW RISE OF NOACs

Prescription items dispensed in the community in England. Edoxaban was approved in 2015.

European Society of Cardiology guidance recommends that NOACs are broadly preferable to warfarin for non-valvar AF after a discussion about the risks and benefits compared with warfarin.

THE NOACs

All NOACs are indicated for the prevention of stroke and systemic embolism in adults with nonvalvular AF who have one or more risk factors, such as prior stroke or transient ischaemic attack; age ≥75 years; hypertension; diabetes mellitus; and symptomatic heart failure. Unlike warfarin, the NOACs have predictable therapeutic responses, rapid onset of action, fewer drug interactions, and no requirement for regular coagulation monitoring.

Anticoagulant effect of NOACs

The coagulation cascade is a series of reactions involving coagulation factors that ultimately result in the formation of a blood clot. The NOACs directly inhibit one specific coagulation factor in the cascade, whereas warfarin prevents the coagulation process by suppressing the synthesis of several vitamin K-dependent coagulation factors.

Anticoagulant agents

Dabigatran

Apixaban

Rivaroxaban

Edoxaban

Drug-drug and drug-food interactions:

Liver metabolism:

Renal excretion:

Bioavailability:

Usual dose:

Half-life:

Peak plasma level:

Usual dose:

Half-life:

Peak plasma level:

Renal excretion:

Liver metabolism:

Usual dose:

Half-life:

Peak plasma level:

Renal excretion:

Liver metabolism:

Usual dose:

Half-life:

Peak plasma level:

Renal excretion:

Liver metabolism:

Usual dose:

Half-life:

Peak plasma level:

Renal excretion:

Liver metabolism:

Gastrointestinal (GI) bleeding was greater with rivaroxaban.

Intracranial and fatal bleeding occurred less frequently in the rivaroxaban group. GI bleedings were similar between both groups.

The National Institute for Health and Care Excellence recommends NOACs as an option for non-valvar AF after a discussion about the risks and benefits compared with warfarin.