NHS
Rotherham
Clinical Commissioning Group

Quick Reference Document on Anticoagulation with Warfarin.

This document summarises information found in the AC2 Oral anticoagulants: Warfarin prescribing, administration and monitoring section of the Rotherham Foundation Trust (TRFT) Anticoagulation / VTE policy for adults document. A copy of this can be found below:

ORAL ANTIOCOAGULANT '

and within Rotherham CCG Top Tips & Therapeutic guidelines under Cardiovascular system via the link, and should be read in conjunction with this document if further detail is required. It is not intended to replace training on the initiation and use of warfarin.

General guidance

Anticoagulants are high risk medicines, therefore before prescribing:

- Clinically assess the patient
- Undertake baseline investigations
- Consider the risks and benefits of anticoagulation prior to commencement of therapy
- Provide patient information / alert cards
- Arrange appropriate follow up and review
- Warfarin 1mg tablets should ideally be used for maintenance therapy, however a combination of different strengths can be used in suitable patients.

Patients must be given information on the treatment they are being offered, and available alternatives. The need for anticoagulation therapy, venous thromboembolism (VTE) prophylaxis and any associated risks must be discussed with the patient, and remains the responsibility of the prescribing health care professional.

Initiation of warfarin therapy

Warfarin is indicated as a treatment choice for prophylaxis and treatment if direct oral anticoagulants (DOAC's) are contraindicated, in patients at extremes of weight who achieve inadequate levels with DOACs, new thrombus whilst taking a DOAC and patients with mechanical heart valves and triple positive anti-phospholipid syndrome.

Warfarin should only be initiated by adequately trained and competent individuals. An example of the type of training can be found in the MRHA online oral anticoagulants e-learning module (https://www.gov.uk/government/publications/e-

learning-modules-medicines-and-medical-devices/e-learning-modules-medicines-and-medical-devices#oral-anticoagulants). Warfarin should be taken once daily at a fixed or regular time.

Ensure baseline blood results (i.e. Full Blood Count, Urea and Electrolytes, coagulation screen and baseline International Normalised Ratio (INR)) are within normal ranges before commencing warfarin.

Initiation checks, counselling and dosing should be in line with the TRFT Oral Anticoagulant: Warfarin prescribing, administering and monitoring document (see above). Please note that this is a TRFT document and as such some of the processes and procedures are not relevant to primary care.

Clinical indication, Target INR and duration of therapy

The table below is taken from the TRFT Oral Anticoagulant: Warfarin prescribing, administering and monitoring document. The values and durations within the table represent those expected for the majority of patients, however individual patient factors may lead to a deviation from these.

Condition	Target INR	Duration
THROMBOSIS: If DOAC contraindicated		
DVT PE	2.5	Start on warfarin and refer to Anticoagulation Clinic and to Thrombosis Clinic
DVT or PE in advanced renal disease	2.5	Start on warfarin and refer to Anticoagulation Clinic and to Thrombosis Clinic
DVT whilst taking warfarin	3.5	As advised by consultant haematologist
ATRIAL FIBRILLATION: If DOAC contraindicated		
Non-valvular AF	2.5	Life long
AF associated with moderate severity mitral stenosis	2.5	Life long
AF for cardioversion	2.5	Minimum of 3 WEEKS before and 4 WEEKS AFTER, on advice from Cardiologist
HEART VALVE REPLACEMENT		
Mechanical heart valve prosthesis as defined by cardiology/cardiothoracic team	Variable as per cardiothoracic team	Lifelong
OTHERS		
Mural thrombus +/- myocardial infarct	2.5	Review after 3 months with ECHO on advice from Cardiologist
Antiphospholipid syndrome	2.5	Lifelong

Once therapeutic range has been reached, newly initiated patients require weekly or sometimes twice weekly INR review. As the INR settles into the therapeutic range, INR interval testing can be increased to once a fortnight, increasing to once a month. Where control is very stable, testing can be increased to 8-12 weekly, however, testing frequency should never be greater than 12 weeks.

Maintenance dosing

Treatment with warfarin requires monitoring of INR and dose adjustment guided by the use of approved clinical decision support software (CDSS). Dose adjustments should take into account deviation of the INR from the target, the usual maintenance dose, the presence of any destabilizing factors (i.e. concurrent illness, medication changes), presence of known risk factors and the ease of monitoring the patient.

Following a dose adjustment, testing should be brought forward to assess the effect of the dose change.

Drug interactions

Many drugs have a potential, but unpredictable interaction with the Vitamin K antagonists such as warfarin. Therefore any change in medication (addition or removal) a repeat INR must be taken within 2- 4 days.

Patients on antiplatelet medication

The use of combination of warfarin and antiplatelet therapy should be assessed on an individual patient basis, considering the disease-specific thrombotic risk and the patient-specific bleeding risk. If in doubt, seek specialist advice.

Management of INRs above 8

INR above 8 but below 10 – discuss with admissions unit at TRFT
INR above 10 – stop warfarin and admit to hospital
Major bleeding – admit to hospital.

Risk of bleeding for patients undergoing dental procedure
See Appendix 1 for further information.

Appendix 1

Management of dental patients taking anticoagulants and antiplatelets

The operating surgeon, dentist, or interventional radiologist must assess the risk of bleeding for the individual patient and discuss this and the plan for peri-operative anticoagulation with them. The plan must be recorded clearly in the notes including a plan for when the patient is discharged.

1. **Establish bleeding risk with dental procedure**		
Dental procedures that are unlikely to cause bleeding	**Dental procedure that are likely to cause bleeding**	
	Low risk of post-operative bleeding complications	**High risk of post-operative bleeding complications**
Local anaesthesia by infiltration, intraligamentary or mental nerve block Local anaesthesia by inferior dental block or other regional nerve blocks Basic periodontal examination Supragingival removal of plaque, calculus and stain Direct or indirect restorations with supragingival margins Endodontics – orthograde Impressions and other prosthetic procedures Fitting and adjustment of orthodontic appliances	Simple extractions (1-3 teeth, with restricted wound size) Incision and drainage of intra-oral swellings Detailed six point full periodontal examination Root surface instrumentation (RSI) and subgingival scaling Direct or indirect restorations with subgingival margins	Complex interactions, adjacent extractions that will cause a large wound or more than 3 extractions at once Flap raising procedures: Elective surgical extractions Peridontal surgery Preprosthetic surgery Periradicular surgery Crown lengthening Dental implant surgery Gingival recontouring Biopsies