Endoscopy Anticoagulation - Full Clinical Guideline

Reference no.: CG-T/2014/206

1. Introduction

This clinical guideline applies to all adult patients undergoing GI endoscopy at Derby Teaching Hospitals NHS Foundation Trust

2. Aim and Purpose

To provide a clear and simple flowchart approach to decision making around anticoagulation and endoscopic procedures

3. Definitions

Abbreviations:

AF:	Atrial Fibrillation
CCF:	Congestive Cardiac Failure
DOAC:	Direct Oral Anticoagulants
EUS:	Endoscopic Ultrasound
ERCP:	Endoscopic Retrograde Cholangiopancreatography
EMR:	Endoscopic Mucosal Resection
ESD:	Endoscopic Submucosal Dissection
FNA:	Fine Needle Aspiration
INR:	International Normalised Ratio
PEG:	Percutaneous Endoscopic Gastrostomy
LMWH:	Low Molecular Weight Heparin
TIA:	Transient Ischaemic Attack
VTE:	Venous Thromboembolism

All Procedures

For patients on prophylactic enoxaparin (fixed low dose - 20/40mg od), aspirin, NSAIDs or dipyridamole, all endoscopic procedures may be performed in the absence of a pre-existing bleeding disorder.

Prophylactic enoxaparin **should not** be omitted the night before a procedure.

Further management of anticoagulation or antiplatelet therapy depends on whether the planned endoscopic procedure is **high risk** or **low risk**.

Low risk Procedures

Diagnostic procedures +/- biopsy (including Barrett's surveillance)
Biliary or pancreatic stenting
Diagnostic EUS
Oesophageal, enteral or colonic stenting
Device-assisted enteroscopy without polypectomy
PEG removal (apart from buried bumper)
Botox injection

High Risk Procedures
Polypectomy
ERCP with sphincterotomy or ampullectomy
EMR/ESD
Dilatation of strictures
Therapy of varices or haemorrhoids
EUS with sampling or intervention
PEG insertion
Oesophageal / Gastric radiofrequency ablation

APC –usual practice to discontinue prior to planned high risk procedure but can be used at endoscopist's discretion in emergency as haemostatic technique

Management of Anticoagulation

Low Risk Procedures

Clopidogrel/Prasugrel/Ticagrelor
Continue therapy

DOACs (Dabigatran/Rivaroxaban/Apixaban/Edoxaban)
Omit DOAC on morning of procedure

Warfarin
Check INR during week before endoscopy
If INR within therapeutic range, continue usual daily dose
If INR above therapeutic range but <5, reduce daily dose until INR returns to normal range

In patients on warfarin, low risk procedures can be undertaken with an INR up to 4

Therapeutic enoxaparin
Continue therapy

High Risk Procedures

Clopidogrel / Prasugrel / Ticagrelor
Consider cold snare polypectomy <1cm on clopidogrel monotherapy
Low Risk Condition
Ischaemic heart disease without coronary stent
Cerebrovascular disease
Peripheral vascular disease

Stop 7 days before endoscopy
Continue aspirin if already prescribed
Restart 2 days after endoscopic procedure

High Risk Condition
Coronary artery stents

Discuss with consultant interventional cardiologist and
Consider stopping 7 days before endoscopy if:

- 6-12 months after insertion of drug eluting coronary stent
- >1 month after insertion of bare metal coronary stent

Continue aspirin

DOACs (Dabigatran / Rivaroxaban / Apixaban / Edoxaban)
Take last dose of drug 3 days before endoscopy
For dabigatran with eGFR 35-50, take last dose of drug 5 days before procedure
In any patient with rapidly deteriorating renal function a haematologist should be contacted
Restart DOAC 3 days after procedure

Therapeutic enoxaparin
Give last dose at least 24 hours prior to procedure – usually this means omit enoxaparin the day before the high risk endoscopic procedure

High Risk Procedures

Warfarin
Warfarin may be continued prior to banding of oesophageal varices on the specialist recommendation of a hepatologist

Low Risk Condition
Xenograft heart valve
AF without high risk factors
>3 months after VTE

Stop warfarin 5 days prior to endoscopy
Check INR prior to procedure to ensure INR <1.5
Restart warfarin evening of procedure with usual daily dose
Check INR 1 week later to ensure adequate anticoagulation

High Risk Condition
Metal heart valve in mitral or aortic position
Prosthetic heart valve and AF
AF and mitral stenosis
AF and stroke/TIA within 3 months
AF with previous stroke/TIA and 3 or more of CCF/hypertension/age>75/diabetes

Patient with a high risk condition who need warfarin interrupting MAY need “Bridging” with enoxaparin whilst the warfarin is interrupted

Stop warfarin 5 days before endoscopy
Start LMWH 2 days after stopping warfarin
Omit LMWH on day of procedure
Restart warfarin evening of procedure with usual daily dose
Restart LMWH after 48 hours (i.e. second day after procedure) and continue until INR within therapeutic target range

See page 5 for full protocol

Bridging patients whilst not taking Warfarin

The following is the protocol to follow when patients may require bridging

1) Requesting Consultant to decide whether Bridging is required

2) Requesting Consultant to prescribe required enoxaparin (at least 10 syringes + sharps bin)

3) Preassessment nursing staff to advise patient about process

4) Preassessment nursing staff to email anticoagulation nurses to arrange INR after procedure and to advise patient when to stop LMWH i.e. when warfarin therapeutic

- Stop warfarin 5 days before endoscopy
- Start LMWH 2 days after stopping warfarin
- Omit LMWH on day of procedure
- Restart warfarin evening of procedure with usual daily dose
- Restart LMWH after 48 hours (i.e. second day after procedure) and continue until INR within therapeutic target range

Information to email to anticoagulation nursing team (dhft.anticoagulationclinic@nhs.net) stating the following:

- Patient's name;
- Date of birth;
- NHS number;
- Hospital number;
- Home address;
- GP name; GP surgery address;
- Where INR checked;
- If stopped before; who administered injections;
- Is additional support is needed from practice/district nurses?

The anticoagulation nursing team will contact the patient to inform then when they need to have their INR checked and liaise with the team who normally manages the patient's INR
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4. References (including any links to NICE Guidance etc.)

Andrew M Veitch et al. Gut 2021;70:1611-1628

5 Documentation Controls

Documentation Controls

Development of Guideline:	Dr Jess Williams, Consultant Gastroenterologist
Consultation with:	Dr A McKernan, Consultant Haematologist
Approval date:	EUG 9th November 21 Medical Division 16th November 21
Review Date:	November 2024
Key Contact:	Dr Jess Williams, Consultant Gastroenterologist

Appendix I –checking form

Patient Details or Label	**Planned endoscopy date if booked:**
Name: …… NHS no: …… DOB: …… Hospital no: ……	**Procedure Type:** **Patient's current weight:** ……. **kg**

Anticoagulation/Anticoagulant Medication Checking Form

Whilst in clinic or when performing a surveillance assessment, please obtain as much of the following information as possible.

Name of anticoagulation/antiplatelet medication(s): ……

Reason for being on above medication and when started:…… : ……./……../…..……

If taking Warfarin please ask the following questions:

Where does the patient have their INR checked:……

What is their INR range:…….

Has the patient ever stopped their Warfarin for a procedure before**:** Yes / No (circle)

Did they require bridging when they stopped their Warfarin**:** Yes / No (circle)

If yes, did they manage to give their injections themself**:** Yes / No (circle)

If no, who gave them their injection: ……

Plan for stopping anticoagulation/antiplatelet medication,

Following the British Society of Gastroenterologists (BSG) guidelines on the management of patients taking anticoagulation/antiplatelet medications (2016) :

Does patient need to stop the medication: Yes / No (circle)

If stopping antiplatelet is the patient suitable for Aspirin: Yes / No (circle)

Is bridging required whilst the patient is not taking the medication: Yes / No (circle)

Reviewed by Requesting Consultant

Do you agree with the plan to stop anticoagulation/antiplatelet medication: Yes / No (circle)

If no, is further information required from a specialist: Yes / No (circle)

State specialist to be contacted: ……

Bridging required: Yes / No (circle)

If yes, state dose of Enoxaparin (1.5mg/kg OD) patient's current weight …….kg x 1.5mg = …… OD

Date to take last dose of medication: ……./……../…… Date to start Enoxaparin: ……../……../…..……

Requesting Consultant's Signature: …… Date: ……../……./…..……

Please turn over

If bridging is required, has the patient been informed: Yes / No (circle)

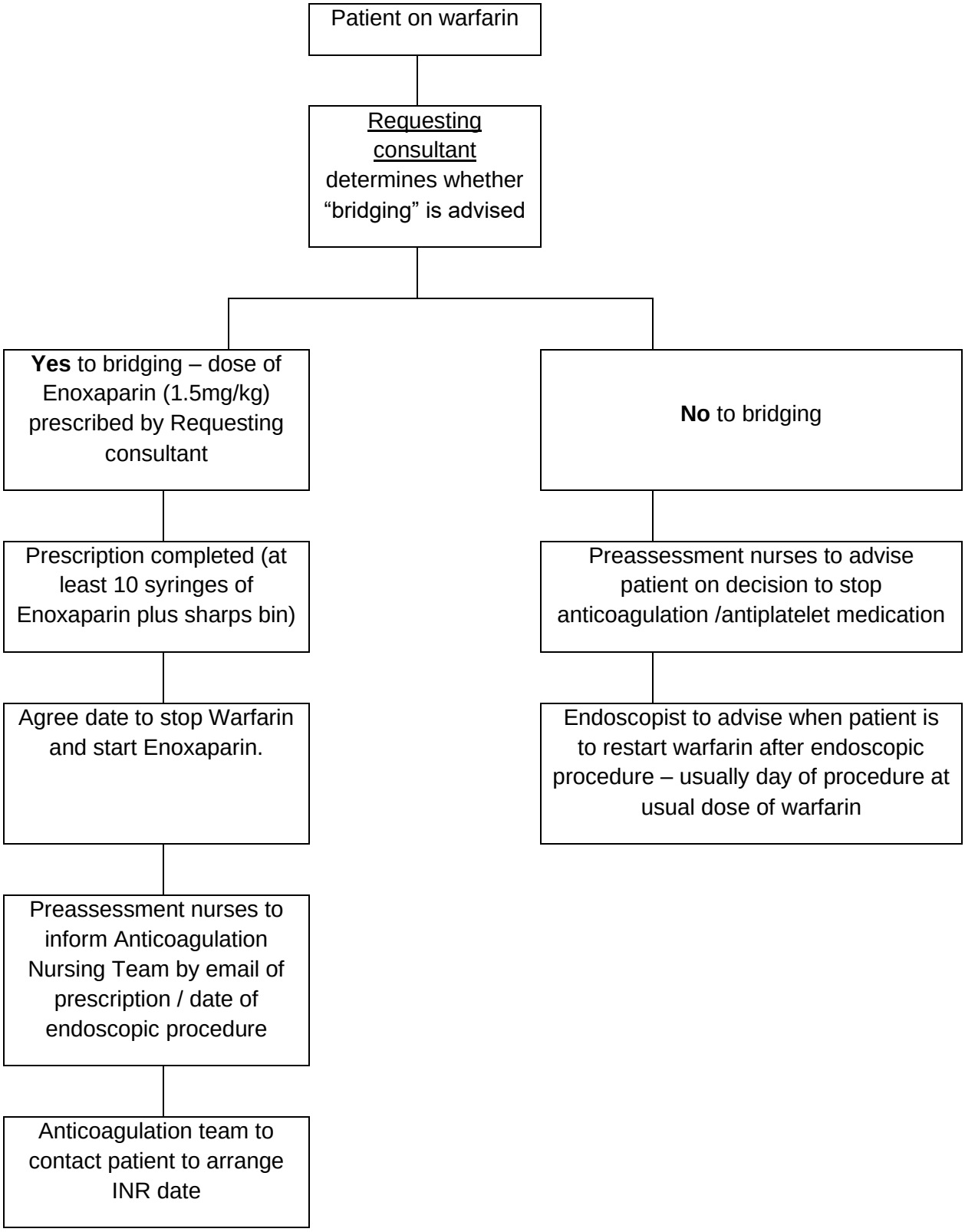
Date prescription given to patient: ..…../..…../……..….

Date Anticoagulation Nursing Team form emailed to them: ..…../……./……..….

The British Society of Gastroenterologists (BSG) guidelines on the management of patients taking anticoagulation/antiplatelet medications (2016) can be found at:

https://www.bsg.org.uk/resource/bsg_esge_anticoag_16.html

Appendix II - Flowchart for the management of anticoagulation/antiplatelet medication.



Appendix III – Standard letter or bridging

Following our recent telephone conversation, I am writing to confirm that your Endoscopy appointment has been booked for: **DATE**

Please attend: Endoscopy Unit, Level 1, Main Hospital, Royal Derby Hospital

Adjusting your medication

- You will need to collect your Enoxaparin injections from the Royal Derby Hospital's branch of Pride Pharmacy.
- Please take your last dose of Warfarin on DATE.
- Then start treatment dose low molecular weight heparin (LMWH) injections on DATE and DATE (the evening would be preferred time).
- No LMWH injection on DATE (need to be 24 hours clear of Endoscopy).
- On the day of your colonoscopy you will be advised when to restart both Warfarin and LMWH injections.
- The anticoagulation nursing team will contact you directly regarding your Warfarin and Enoxaparin management for after your Endoscopy.
- You can take your other regular medications as normal.

If you have any queries, please telephone 01332 786063

Appendix IV – Information sheet for when stopping Anticoagulation/Antiplatelet medication.

RISKS OF STOPPING ANTICOAGULANT / ANTIPLATELET (blood thinning) MEDICATION

You have been booked to have an endoscopic procedure and a review regarding adjusting your regular anticoagulation “blood thinning” medication has taken place

A letter is attached with instructions confirming what you have been informed to do and when to stop your anticoagulant.

The risks and benefits of having the procedure have been discussed including the risks of adjusting your regular anticoagulant temporarily.

To confirm the main risks when adjusting your anticoagulant are:

- **Risk of stroke or systemic embolism (blood clot in artery to the brain, limbs or intestines).**
- **Recurrent deep vein thrombosis and/or pulmonary embolism (blood clot in leg veins or to the lungs)**
- **Risk of stroke or blood clot on your mechanical artificial heart valve**
- **Increased risk of excessive bleeding following your procedure due to re starting your anticoagulant.**

The risks of adjusting anti-coagulation will vary enormously between individuals and depends on many factors including the underlying medical condition for which you are on anticoagulants, other health problems, duration and complexity of the procedure etc. Nevertheless it is important you consider this when making your decision.

It is important you read the instruction letter attached with regard to adjusting the anticoagulant “blood thinner” you are taking.