NHS
Greater Glasgow and Clyde

CLINICAL GUIDELINE

Antiplatelet or Anticoagulant Treatment & Outpatient Procedure, Gynaecology

A guideline is intended to assist healthcare professionals in the choice of disease-specific treatments.

Clinical judgement should be exercised on the applicability of any guideline, influenced by individual patient characteristics. Clinicians should be mindful of the potential for harmful polypharmacy and increased susceptibility to adverse drug reactions in patients with multiple morbidities or frailty.

If, after discussion with the patient or carer, there are good reasons for not following a guideline, it is good practice to record these and communicate them to others involved in the care of the patient.

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Any printed copies should therefore be viewed as 'Uncontrolled' and as such, may not necessarily contain the latest updates and amendments.

Greater Glasgow and Clyde Guideline

Antiplatelet or Anticoagulant Therapy:

Management of Patients Undergoing Invasive Outpatient Gynaecological Procedures

Factor Xa inhibitors Apixaban (Eliquis®), Edoxaban (Lixiana®) and Rivaroxiban (Xarelto®) are the preferred anticoagulant therapy for treatment of venous thromboembolism and non-valvular atrial fibrillation (AF). Within NHS GG&C, edoxaban is the treatment of choice for AF and Apixaban for pulmonary embolism. They are direct oral anticoagulants (DOACs) and are Factor Xa inhibitors. An additional DOAC, dabigatran (a direct thrombin inhibitor), is also in use within NHS GG&C in a small number of patients.

DOACs are in tablet form and are taken orally once (rivaroxaban, edoxaban) or, twice (apixaban, dabigatran) daily. Rivaroxaban may also be taken twice daily in the first 21 days as a loading dose. They have a relatively short half life (of 8-12 hours) but this may be longer in the presence of renal impairment (creatinine clearance, (CrCl) <30ml/min). The CrCl is the preferred measure of renal function (rather than eGFR) when managing DOACs (see Appendix A for the NHS GG&C creatinine clearance calculator). With the exception of dabigatran (for which there is an antidote, Praxbind® (idarucizumab)) the anticoagulant effect of DOACs cannot be easily reversed and as such emergency surgery or procedures may be challenging to manage.

This guideline will discuss the management of patients taking anticoagulants (warfarin or DOACs) and anti-platelet agents (e.g. clopidogrel) when undergoing elective gynaecological procedures, according to their risk of haemorrhage.

Contents

1. Minor Invasive Outpatient Gynaecological Procedures with Low Risk of Bleeding

Invasive gynaecological procedures with a low risk of bleeding are listed below:

- Hysteroscopy
- Pipelle endometrial biopsy
- Colposcopy including punch biopsy
- Vulval punch biopsy
- Insertion of IUS/IUD
- Cervical polypectomy
- Endometrial ablation

Local anaesthetic using a vasoconstrictor should be considered if appropriate.

DOACs

DOACs do not need to be withheld for minor gynaecological procedures at low risk of bleeding. However, consideration should be given to this risk of bleeding and if there is clinical concern, then withholding the DOAC for 24 hours prior to the procedure may be appropriate.

If there is significant renal impairment (CrCl <30ml/min), omit DOAC >48 hrs prior to procedure (see Appendix A for the creatinine clearance calculator). If there is concern about renal function, in certain circumstances withholding the DOAC for 72 hours may be considered following discussion with Haematology.

Checking the coagulation screen is not always necessary as it is a poor indicator of any residual anticoagulant effect for DOACs, other than dabigatran. Checking the anti Xa may also be considered. For minor invasive gynaecological procedures however, checking these blood measures is not required routinely.

Clopidogrel

Clopidogrel does not need to be withheld for gynaecological procedures at low risk of bleeding.

Aspirin

Aspirin does not need to be withheld for gynaecological procedures at low risk of bleeding.

Warfarin

Warfarin does not need to be withheld for gynaecological procedures at low risk of bleeding. However, INR should be assessed within 72h before the procedure to ensure the patient is not over-anti-coagulated.

2. Invasive Outpatient Gynaecological Procedures with Moderate Risk of Bleeding

Invasive gynaecological procedures with a moderate risk of bleeding are listed below:

- LLETZ
- Endometrial polypectomy/Myosure
- Endometrial curettage
- Elective manual vacuum aspiration (MVA) or medical/surgical management of miscarriage*
- Insertion of Word catheter for Bartholin's cyst/abscess*
- Vulval excision biopsy/wide local excision

Discussion with Haematology and Cardiology may be required. The risk of thrombosis should be established (see Appendix B and NHS GG&C guidance).

Local anaesthetic using a vasoconstrictor should be considered if appropriate.

*These procedures may require discussion with Haematology in an acute emergency setting.

DOACs

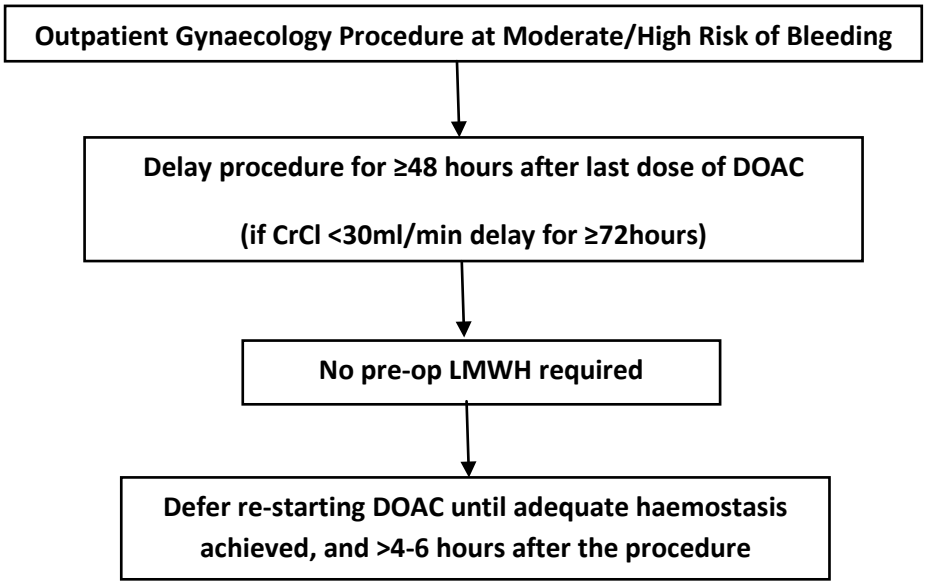
The procedure should be delayed until ≥48 hours after the last dose of DOAC depending on the risk of bleeding. If the creatinine clearance is <30ml/min, then the DOAC should be withheld for ≥72 hours. If there are concerns about bleeding or renal impairment pre-operatively then obtaining an anti-xa level +/- coagulation screen (ensuring AP <13 seconds(s) and APTT <38s) may be indicated.

Pre-op bridging low molecular weight heparin (LMWH) is not usually required.

The post-operative dose of the DOAC should be deferred until >4-6 hours after the procedure however this may be longer if there is concern about haemostasis. This may be longer depending on the extent of the procedure or the use of regional anaesthesia however this is out with the scope of this guideline.

This is summarised in Figure 1.

Figure 1: Management of DOACs in patients undergoing an invasive outpatient gynaecological procedure at moderate/high risk of bleeding



Clopidogrel

Stop clopidogrel 7 days before any invasive gynaecological procedure at moderate/high risk of bleeding. Aspirin may be used in place of clopidogrel during these 7 days if indicated.

This may require discussion with Cardiology and risk of thrombosis assessed (see Appendix B and NHS GG&C guidance).

Post-operative LMWH (provided there is no contraindication) and anti-embolic stockings should be given post-operatively. The dose of LMWH should depend on the risk of VTE (see Appendix B and NHS GG&C guidance): if there is a low risk then prophylactic LMWH can be given; if there is a high risk then treatment dose LMWH should be considered.

Re-start clopidogrel 48 hours after the procedure.

Aspirin

Aspirin does not need to be withheld before any invasive outpatient gynaecological procedure at moderate/high risk of bleeding. Patients should be informed however of the greater risk of bleeding +/- haematoma formation.

Warfarin

Stop warfarin 5 days before any invasive gynaecological procedure at moderate risk of bleeding. The target INR should be ≤1.4 for the procedure. LMWH should be given on each day pre-operatively and the dose dependent on the thrombosis risk (see Appendix B and NHS GG&C guidance).

Postoperative LMWH and anti-embolic stockings should also be given. Again, the dose will depend on the risk of thrombosis (see Appendix B and NHS GG&C guidance). The original dose of warfarin therapy may be commenced from day 1 post-operatively as it would typically take 48-72 hours to have an effect.

The anticoagulant clinic should be informed of the date of the procedure and appropriate anticoagulant follow up should be in place 5-7 days following the discharge from hospital.

Vitamin K 5mg IV may be given to reverse anticoagulation effect of warfarin if INR is >1.5 on day before procedure.

3. Haemorrhage and Emergency Invasive Gynaecological Procedures

This can be challenging as the anticoagulant effect of DOAC (with the exception of dabigatran) cannot be reliably reversed. Major surgery should be delayed where possible until the anticoagulant effect of DOACs has been eliminated. General major haemorrhage principles should be followed and discussed with Haematology +/- Cardiology.

The risk of thrombosis should be established (see Appendix B and NHS GG&C guidance).

Local anaesthetic using a vasoconstrictor should be considered if appropriate.

DOACs

- Check the anti-xa level, coagulation screen (including fibrinogen), full blood count and renal function
- Ensure there is a full cross match available
- Ascertain the time of the most recent anticoagulant, ensuring no further doses are given
    - If the DOAC has been ingested recently (<6 hours) consider giving oral activated charcoal to inhibit further drug absorption (anti-Xa DOACs are not dialysable)
- Treat any additional causes of coagulopathy
- Consider general haemostatic measures (such as mechanical compression and 1g IV tranexamic acid)
- Optimise tissue oxygenation
- Discuss with the Haematologist
    - Consider giving red cell or platelet transfusion
    - Consider giving 5g Praxbind® (idarucizumab) if significant dabigatran anticoagulant effect persists
    - Consider giving prothrombin complex concentrate eg. Beriplex® 50units/kg or activated clotting factors (e.g. FEIBA® 50units/kg) if significant anti-xa DOAC effect persists

Clopidogrel

Follow general major haemorrhage principles and discuss with Haematology.

Aspirin

Follow general major haemorrhage principles.

Warfarin

Follow general major haemorrhage principles and discuss with Haematology.

Vitamin K 5mg IV may be given to reverse anticoagulation effect of warfarin, but will take 6-24 hours for an effect. For immediate reversal of warfarin anticoagulation, an infusion of Beriplex will be required.

The target INR should be ≤1.4 for the procedure.

4. Appendix

A) Creatinine clearance calculator

http://www.staffnet.ggc.scot.nhs.uk/Clinical%20Info/Documents/CrCl%20Online%20Calculator%20-%20Locked%20-%20160930.xls

B) Risk of thrombosis according to medical condition

Low risk:

Uncomplicated non rheumatic AF without previous embolism

Single episode of VTE >3 months prior

High risk:

AF with previous stroke or embolism or rheumatic mitral valve disease

Mechanical mitral valve prosthesis

Bio-prosthetic heart valve or modern (inserted after 1990) mechanical aortic valve prosthesis inserted >2months prior and in sinus rhythm

Any prosthetic heart valve with AF or previous embolism

Any prosthetic heart valve placed within last 2 months

'Ball and Cage' mechanical heart valve prosthesis in any position

Arterial embolism or venous thrombosis within previous 3 months

Previous recurrent venous thrombosis

Any patient requiring target INR 3-4

Previous venous thrombosis and known high risk thrombophilia

References and Links to NHS GG&C Guidance

1. **Apixaban, Edoxaban and Rivaroxaban: Management of Haemorrhage, Surgery and other Invasive Procedures, Clinical Guideline, Greater Glasgow and Clyde, January 2019**

   http://www.staffnet.ggc.scot.nhs.uk/Info%20Centre/PoliciesProcedures/GGCClinicalGuidelines/GGC%20Clinical%20Guidelines%20Electronic%20Resource%20Direct/Apixaban%20Edoxaban%20and%20Rivaroxaban%20Management.pdf

2. **Dabigatran, Management of Haemorrhage, Surgery or other Invasive Procedures, Acute, Clinical Guideline, Greater Glasgow and Clyde, January 2018**

   http://www.staffnet.ggc.scot.nhs.uk/Info%20Centre/PoliciesProcedures/GGCClinicalGuidelines/GGC%20Clinical%20Guidelines%20Electronic%20Resource%20Direct/Dabigatran,%20Management%20of%20Haemorrhage,%20Surgery%20or%20Other%20Invasive%20Procedures,%20Acute.pdf

3. **Management Plans for Patients on Warfarin in the Peri-operative period, GGC Medicines, Adult Therapeutic Handbook (this guideline is currently under review)**

   https://handbook.ggcmedicines.org.uk/guidelines/cardiovascular-system/management-plan-for-patients-on-warfarin-in-the-peri-operative-period/

4. **Thromboprophylaxis for Medical and Surgical Patients**

   http://www.staffnet.ggc.scot.nhs.uk/Acute/Documents/Thromboprophylaxis%20for%20Medical%20and%20Surgical%20Patients.htm

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