INTRODUCTION

This procedure describes the steps to be taken before undertaking any invasive diagnostic breast or axillary procedures on patients receiving antiplatelet or anticoagulant (AP/AC) therapy.

PURPOSE AND SCOPE

Patients taking AP/AC medication may be at increased risk of suffering post biopsy haematoma and excessive bleeding following invasive diagnostic procedures. Post biopsy haematoma may obscure impalable lesions on both ultrasound and mammography and may ultimately delay repeat biopsy and localization for surgery. A compromise should be made between the risk of post procedure bleeding and the risks associated with the interruption of AP or AC therapy. The degree of invasiveness of the procedure is likely to be correlated with the extent of bleeding, with procedures being ranked from less to more severe – FNA < core biopsy < vacuum assisted biopsy. (Pritchard et al 2007)

Discontinuation of AP or AC therapy carries a risk of thrombosis. For many patients a short period without treatment (or reduction in the international normalized ratio – INR - in the case of warfarin) carries only a small risk but in others the chance of thrombosis is significant.

The type of AP or AC medication the patient is taking will determine the course of action to be taken prior to the procedure being undertaken.

This procedure covers the following principle areas

I. AP medication and risk assessment

II. Management of patients on clopidogrel and clopidrogel and aspirin

III. Management of patients taking Warfarin, Dabigatran, Apixaban, Edoxaban, Rivaroxaban
RESPONSIBILITY

Responsibility for ensuring that this procedure is adhered to rests with the Consultant Radiologist and the Advanced Practitioner supervising and performing the diagnostic procedure.

ANTIPLATELET/ANTICOAGULANT MEDICATION AND RISK ASSESSMENT.

Clopidogrel and aspirin.
Patients taking this medication may be classified as having a high risk or low risk of developing thrombosis when stopping AP therapy. (NICE 2004)

High risk

Patients at high risk of thrombosis when stopping AP therapy include-

- Patients who have undergone coronary artery stenting within six weeks.
- Patients who have been treated with a drug eluting stent (DES) within 12 months.
- Patients with a recent acute coronary syndrome / MI even if not treated by stenting. These patients will often be on dual AP therapy for 1 year.

Patients treated with a DES there is a small but continuing risk of very late stent thrombosis, even after 12 months

Low risk

Patients at low risk of thrombosis when stopping AP therapy-

- Patients who have received a bare metal stent and are greater than 6 weeks after stent placement.
- Patients with coronary heart disease on aspirin alone...
- Patients who have undergone Coronary artery bypass graft (CABG).
- There are a few patients with chronic atherosclerotic disease on single agent clopidogrel AP therapy because of aspirin intolerance.

Conclusion

RCR bsbrsociety July 12 Protocol for breast biopsy and surgery on patients taking antiplatelet or anticoagulant medication requiring invasive breast procedures: has been developed based on Pritchard et al 2007 who concluded that the relatively small increased risk of breast haematoma offsets the potential harm of coronary occlusion should antiplatelet therapy be stopped.
WHAT-ANA-014 Nil by Mouth and peri-Operative Medicines Use Guideline Version 4

Recommends if low dose aspirin, clopidogrel, prticagrelor are to be stopped, this is generally done 7 days (14 days for ticlopidine) before to allow recovery of adequate platelet function. Restart the therapy as soon after as possible.

Warfarin

High Risk (patients who should not stop warfarin)
- Mechanical mitral prosthetic heart valves (not aortic).
- If a patient has been advised by their clinician that they should not be taken off anticoagulation at any time.
- In such instances and if in doubt contact the Referring Clinician for advice

Low Risk
- Those patients with an INR of < 4 who are to undergo core biopsy.
- Those patients with an INR of < 2.5 who are to undergo VA Biopsy

Conclusion

Where levels are above these bssociety recommends warfarin should be stopped for three days.

Restart warfarin with standard dose on the day of procedure ie patients who take warfarin in the morning should take their standard dose on the morning of the biopsy.

This will have no effect on bleeding potential of the procedure the same day,

Patients on: - Dabigatran, Apixaban, Edoxaban, Rivaroxaban (NOACs)
- **am** appointments should be booked at the beginning of the list- delay the morning dose until 1 hour after the biopsy providing haemostasis is secure then continue medication as normal.
- **pm** appointments should be booked at the end of the list with patients taking their normal dose at 7.0am on the morning of examination, resuming normal dosage times the following day if haemostasis is secure.
- For patients booked for vacuum assisted biopsy the anticoagulation dose should be stopped for 24 hours and recommenced 4-6 hours after the biopsy if haemostasis is secure.
- Refer to Policy WHAT-HAE-002 for further information

MANAGEMENT OF PATIENTS ON CLOPIDOGREL, +/- ASPRIN and WARFARIN

1. All patients requiring an invasive diagnostic procedure must be asked if they are taking any AP AC medication. If they are then a full drug history should be obtained by a Radiologist/ Advanced Practitioner. If taking clopidogrel ask about coronary stenting and obtain date of insertion. Details should be documented on the wide bore needle form.
2. Inform all patients of the risk of bleeding and haematoma formation and that this risk is greater for those taking any AP medication.

- Where the risk of bleeding is high or where the consequences of even minor bleeding are significant
- Guideline “Nil By Mouth (NBM) and Peri-operative Medicines Use” and Oral Anticoagulants-Guidelines and Procedures should be referred to.

Summary Table

**Anticoagulation protocol:**

<table>
<thead>
<tr>
<th></th>
<th>14G core biopsy</th>
<th>11G/10G/9G vacuum biopsy</th>
<th>8G/7G vacuum excision</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Warfarin</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>INR&lt;4 proceed</td>
<td></td>
<td>INR &lt; 2.5 proceed</td>
<td>INR &lt;2.5 proceed</td>
</tr>
<tr>
<td>INR &gt;4 stop</td>
<td></td>
<td>INR &gt; 2.5 stop</td>
<td>INR &gt; 2.5 stop</td>
</tr>
<tr>
<td>warfarin for 3 days*</td>
<td></td>
<td>warfarin for 3 days*</td>
<td>warfarin for 3 days*</td>
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<tr>
<td>* re check INR prior to biopsy</td>
<td></td>
<td>* re check INR prior to biopsy</td>
<td>* re check INR prior to biopsy</td>
</tr>
<tr>
<td><strong>Aspirin/Clopidogrel</strong></td>
<td>Proceed</td>
<td>Proceed</td>
<td>Proceed</td>
</tr>
<tr>
<td><em><em>NOACs</em> (if no renal impairment)</em>*</td>
<td>AM biopsy &gt;omit morning dose and take after biopsy PM &gt; proceed</td>
<td>Withhold NOAC for 24 hours, restart 4-6 hours if haemostasis secure</td>
<td>Withhold NOAC for 48 hours, restart 4-6 hours after haemostasis is secure</td>
</tr>
<tr>
<td><strong>LMWH</strong></td>
<td>Withhold previous dose restart 4-6 hours after procedure.</td>
<td>Withhold previous dose restart 4-6 hours after procedure.</td>
<td>Withhold previous dose restart 4-6 hours after procedure.</td>
</tr>
</tbody>
</table>

* Dabigatran, Apixaban, Edoxaban, Rivaroxaban

**References**

NICE clinical knowledge summaries- Oral anticoagulants NICE 2015.


Protocol for breast biopsy and surgery on patients taking antiplatelet or anticoagulant medication requiring invasive breast procedures:
www.bsbrsociety.org/files/8313/9895/6729/biopsy_guidelines_july12
“Nil By Mouth (NBM) and Peri-operative Medicines Use”
Oral Anticoagulants-Guidelines and Procedures