Appendix 11. Drug Therapy

Click here for the full guideline

The management of patient’s drug therapy is essential. Continue, as a general rule, all regular medications up to and including the day of operation. This is particularly important for B-blockers, and other drugs used to treat angina, heart failure, bronchospasm and epilepsy. Immunosuppressants should also be continued.

For Aspirin and clopidogrel see separate guidelines. As a simple principle, low dose aspirin should be continued wherever possible.

VERY IMPORTANT: At any point whilst seeing a patient, if you have doubts about the drug therapy, please contact the relevant anaesthetist. See appendix 12 for an alphabetical list of drugs and whether or not they should be continued.

OMIT AND CONSIDER CAREFULLY ALL THE FOLLOWING DRUGS

<table>
<thead>
<tr>
<th>DIABETES DRUGS</th>
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<tr>
<td>[See Trust guidelines for Management of patients with diabetes during surgery/elective procedures].</td>
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Demand careful peri-operative management. Intravenous insulin replacement may be required until oral absorption of drugs is resumed post-operatively. All insulin dependent diabetics should have their requirements discussed with the diabetic nurse specialist teams if there are concerns around how to manage their diabetic medication peri-operatively. HbA1C should be well controlled. HbA1C>8.5% needs referral to specialist nurse teams.

1. Diabetics should be first on the list wherever possible
2. Omit metformin morning of surgery.
3. Omit other oral hypoglycaemics the morning of surgery (check full trust guideline).
4. For s/c insulin (short, medium and long acting) see Trust guideline.
5. All IDDM and NIDDM patients for major surgery should have a sliding scale considered from the morning of surgery, especially if NBM for more than 1 meal. For minor/intermediate procedures, this is very often not necessary, especially for NIDDM (see Trust guideline).
**WARFARIN (and possible bridging therapy):**

**LINK:**

Omit 5 days prior to surgery. INR on admission. For more detail, see Trust anticoagulation guideline: “CLINICAL GUIDELINE FOR THROMBOSIS PREVENTION INVESTIGATION AND MANAGEMENT OF ANTICOAGULATION” Section 37.2 – 37.5 and Appendix 2. In summary:

1. In those patients with mechanical heart valves, therapeutic once daily, morning subcutaneous unfractionated heparin bridging therapy WILL be required when the INR drops below therapeutic levels.
2. For those with AF plus (a.) mitral stenosis (b.) and/or previous embolic events (c.) considered high risk: therapeutic, once daily bridging must be instigated at 24 and 48 hours before the morning of surgery. Daily INRs are not required.
3. All other AF patients can just have their warfarin stopped.

Patients with complex histories of DVT/PE, please contact the DVT clinic for advice.

| **WARFARIN (Cont’d):** | For thrombophilia and recurrent thrombosis in adenocarcinoma please inform a haematologist. Omit 48 hours before the morning of surgery (for all types of surgery and renal function). No bridging therapy is required. 
RIVAROXABAN: Omit 48 hours before the morning of surgery (for all types of surgery). No bridging is required. If there is any degree of renal impairment, omit 96 hours before the morning of surgery. In this situation, once daily, a.m therapeutic bridging therapy is required at 48 hours and 24 hours pre-op See trust guideline. 
DABIGATRAN: 
OTHER ANTICOAGS |
| DIPYRIDAMOLE: | Omit 48 hours prior to surgery |

**MONOAMINE OXIDASE INHIBITORS (MAOIs)**

Are associated with serious adverse interactions during anaesthesia. Hydrazine derivatives including phenelzine should be stopped at least two weeks prior to elective anaesthesia. Pargyline, and other drugs of the non-hydrazine class of MAOIs are less problematic and can be stopped 24 hours before anaesthesia.
<table>
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<tr>
<th><strong>ORAL CONTRACEPTIVES CONTAINING OESTROGEN</strong></th>
<th>Increase the risk of post-operative thrombo-embolism. Therefore consideration should be given to discontinuing them 4 weeks before all elective surgery. For major elective surgery and orthopaedic limb surgery this should certainly be the case. Alternative methods of contraception are required. Laparoscopy is not regarded as a major operation. Progestogen only tablets can be safely continued.</th>
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<tr>
<td><strong>HRT</strong></td>
<td>Hormone Replacement Therapy (HRT) may also increase the risk of post-operative thrombo-embolism and should therefore be considered in the same way as oestrogen containing oral contraceptive pills and discontinued 4 weeks before elective surgery. This is in line with NICE guidance. HRT may be continued if there is good clinical reason to do so.</td>
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<tr>
<td><strong>HERBAL MEDICINES</strong></td>
<td>Omit two weeks before surgery. For more information, see appendix 13. Examples: Echinacea, Ephedra, Garlic, Ginko, Ginseng, Kava, St John’s Wort, Valerian.</td>
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<tr>
<td><strong>SUBCUTANEOUS HEPARIN</strong></td>
<td>Should not be given on the morning of surgery to any patient. Prescription and administration of s/c LMWH (dalteparin) at 18:00 hrs the evening before will be more than 12 hours before the start of elective lists the following day. Most, but not all Anaesthetists and Surgeons, are happy with this arrangement.</td>
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