dental health services victoria
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Management of Patients on Medications that may Influence Haemostasis

Purpose

While there are a number of existing guidelines for the treatment of dental patients taking Warfarin or Aspirin, national dental clinical practice guidelines addressing the newer medications are lacking. This guideline aims to encourage a consistent approach for the treatment of patients who are taking anticoagulants or antiplatelet drugs by providing evidence where available and expert opinion based on recommendations relevant to treatment for the existing new and emerging anticoagulants and antiplatelet drugs relevant in dental practice.

These guidelines are consistent with Therapeutic Guidelines Oral and Dental V2 (2012) and Scottish Dental Clinical Effectiveness Programme (2015)

The management of patients taking injectable anticoagulants (Low Molecular Weight Heparins and Unfractionated Heparin) and those being treated as inpatients within a medical hospital setting is beyond the scope of this guideline.

Guideline

Assess Bleeding Risk:

A thorough medical history must be taken.

- Assess whether the required dental treatment is likely to cause bleeding and if so whether it has a low or higher risk of bleeding complications (*Table 1*)
- Ask the patient about their current or planned use of anticoagulants or antiplatelet drugs (*Appendix 1*) and other prescribed and non-prescribed medications
- Ask the patient whether their drug treatments is lifelong or for a limited time
- Ask the patient about any medical conditions that they have
    - E.g. Atrial Fibrillation, Thromboembolism, Stroke, Heart surgery, Liver Disease
- Ask about the patient's bleeding history

Table 1: *Post-operative bleeding risks for dental procedures*

Low Risk of post-operative bleeding complications	• 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 and subgingival scaling • Direct or indirect restorations with subgingival margins
Higher Risk of post-operative bleeding complications	• Complex extractions*, adjacent extractions that will cause a large wound or more than 3 extractions at once • Gingival Recontouring • Biopsies • Flap raising procedures: - Elective surgical extractions - Periodontal surgery - Pre-prosthetic surgery - Periradicular surgery - Crown lengthening - Dental implant surgery

Managing Bleeding Risk:

For a patient who is taking an anticoagulant or antiplatelet drug and requires dental treatment unlikely to cause bleeding

- Treat the patient following standard procedures, taking care to avoid bleeding

However for a patient who is taking an anticoagulant or antiplatelet drug(s) and requires dental treatment likely to cause bleeding (either Low or High risk as per Table 1)

- If the patients has another relevant medical condition(s) or is taking other medications that may increase bleeding risk consult with the patients general medical practitioner or specialist
- Plan treatment for early in the day and week
- Perform the procedure as atraumatically as possible, use appropriate local measures and only discharge the patient once haemostasis has been achieved
- Advise the patient to take paracetamol, unless contraindicated, for pain relief
- Provide the patient with written post-treatment advice and emergency contact details
- Follow the drug group specific recommendations and advice below.

It is recommended that NO CHANGES are made to anticoagulant and anti-platelet medications prior to dentoalveolar procedures, which have a low risk of bleeding.

Treating a patient taking Warfarin

For a patient who is taking Warfarin or another VKA*, with an INR below 4, treat without interrupting their anticoagulant medication
(Strong recommendation; low quality evidence)

Before surgery:

- Take a detailed medical history including: o
  - warfarin dose regimen
  - o stability of INR
  - o underlying medical conditions and other medications
  - o need for antibiotic prophylaxis. (Consider potential for gut flora suppression and risk of elevated INR due to vitamin K deficiency.)

- Ensure the INR is checked, ideally within 24 hours of the procedure to ensure it is within the therapeutic range acceptable for the patient. If necessary, contact the patient's physician to interpret test results.

- Proceed according to the patient's INR result (See *Table 2*).

- **DO NOT CEASE WARFARIN**

Table 2 *Management of Warfarin*

INR Result (within 24 hours of planned treatment)	Course of Action
Less than 2.2	•Proceed with surgery if no other contraindications •Tranexamic acid mouthwash is **not** required. •Use local measures to control bleeding ***(see Table 4)***
2.2 to 4	•Proceed with surgery if no other contraindications •Tranexamic acid mouthwash protocol ***(see Table 3)*** •Use local measures to control bleeding ***(see Table 4)***
More than 4	• Consult with patient's physician as a matter of urgency to address elevated INR •Do not proceed with surgery until INR is within the patient's therapeutic range. Refer to a specialist surgeon in case of emergency.

Therapeutic Guidelines Oral and Dental (2012)

Table 3

	Tranexamic acid mouthwash protocol
Prior to procedure	Make arrangements for a bottle of 4.8% Tranexamic acid mouthwash to be prepared. The mouthwash is available in Australia via specialised Compounding Pharmacies, but must be ordered prior to the procedure. For dentists with no access to premade mouthwash, a 5% solution of tranexamic acid mouthwash can be made by crushing one x 500mg tablets and dispersing it in 10ml of sterile water immediately before administration. This preparation can be multiplied to reflect the amount of solution required. The preparation should be placed in a secure bottle with a tamper proof lid, and must be labelled according to Therapeutic Guidelines Regulations.
During Procedure	Irrigate sockets with Tranexamic acid mouthwash using a disposable syringe. Fill the socket with loosely packed haemostatic agent Place one suture per socket Ask patient to bite on a gauze pack soaked in Tranexamic acid mouthwash.
After Procedure	Give patient Tranexamic acid mouthwash and advice to rinse with 10 ml by measure for 2 minutes, 4 times a day, and then expel the liquid, for 2 to 5 days. Please reiterate to the patient**, DO NOT SWALLOW** the mouthwash. Supply patient with written instructions including an emergency contact number.
2 days post procedure	Review patient 2 days after extraction and check for bleeding, infection, or pain and treat as necessary.
2 weeks post procedure	Review patient again in 1-2 weeks to check healing has occured

Therapeutic Guidelines Oral and Dental (2012)

Treating a patient taking Antiplatelet medications

Commonly used antiplatelet drugs are Aspirin, Clopidogrel and Ticagrelor.(*See Appendix 1*)

For patients taking single or dual antiplatelet drugs, **do not cease or interrupt medication** (Strong recommendation; Specialist opinion; low quality evidence)

For example. there is evidence to show discontinuation of dual antiplatelet therapy after placement of coronary stent increases the risk of stent thrombosis which frequently leads to death. This risk can be up to 15% (eTG 2012).

Follow general advice for Managing Bleeding Risk (*Box page 2*)

- If the patient is taking **aspirin alone**- Consider limiting the initial treatment area (fewer teeth) and use local haemostatic measures to achieve haemostasis (*Table 4*)
- If the patient is taking other antiplatelet drug or dual antiplatelet drugs
  - Be aware that bleeding may be prolonged – up to an hour
  - Limit the initial treatment area (fewer teeth)
  - Consider carrying out treatments in a staged manner (1-3 teeth per appointment)
  - Actively consider suturing and packing with Gelfoam/ Surgicel (*See Table 4)*

For a patient taking an **injectable anti-coagulant** such as Unfractionated Heparin or a Low Molecular Weight Heparin such as Clexane® and requiring dental treatment which is likely to cause bleeding, for both low and high risk of bleeding complications:

- Consult with the patient's General Practitioner or prescribing Specialist before commencing treatment.
- In case of emergency refer to an Oral Surgeon for management

Table 4

Technique	Local haemostatic measures to control bleeding in at risk patients
Atraumatic surgical technique	•Appropriate flap design and elevation •Gentle minimally traumatic surgical technique
Use a Vasoconstrictor	•Local anaesthetics combined with a vasoconstrictor (Adrenaline) should be administered •Allow **adequate time** for vasoconstrictor to work before proceeding
Pressure	•Apply local pressure with gauze packs •Suture sockets and mucoperiosteal flaps
Haemostatic Adjuncts	•Placement of Gelatin sponge (Gelfoam) or Oxidized Cellulose (Surgicel) in the sockets •Apply Tranexamic acid soaked gauze as per Tranexamic protocol (*Table 3*)

Treating a patient taking Novel Oral Anticoagulants (NOACs)*

For a patient who is taking a NOAC/DOAC, and requires a dental procedure with a **low risk of bleeding complications**, treat without interrupting their anticoagulant medication (*Conditional recommendation, Specialist opinion, very low quality evidence)*

Treat the patient according to the general advice for Managing Bleeding Risk (*Box page 2*) **and:**

- Plan treatment for early in the day
- Limit the initial treatment area (fewer teeth)
- Actively consider suturing and packing with Gelfoam/ Surgicel (*See Table 4)*
- Tranexamic Acid mouthwash protocol (*see Table 3*)
- Review 2 days and 2 weeks post procedure

For a patient who is taking a NOAC and requires a dental procedure with a higher risk of complications, **consulting the patient's prescribing medical practitioner** for advice regarding interrupting their NOAC, or consider referral to a Specialist.

Treat the patient according to the general advice for Managing Bleeding Risk (*Box page 2*) **and:**

- Plan treatment for early in the day to allow for monitoring and management of bleeding complications should they occur
- Consider carrying out treatments in a staged manner over separate visits
- Use local haemostatic measures to achieve haemostasis and actively consider suturing and packing with Gelfoam/ Surgicel (See Table 4)

Patients with Special Needs

It is important to assess the ability of patients and/or their carers to follow through with post-operative home care instructions after extractions and dentoalveolar surgery. This includes the elderly and those living alone.

Where it is anticipated that home care won't be followed through additional precautions are necessary. Sockets are routinely sutured and packed with gelfoam and surgicel, as additional precautions if the patient has been assessed as not being able to follow post-operative home care instructions

- Always provide the patient with written post-treatment advice and emergency contact details
- Refer to a Specialist Oral Surgeon if you feel the case is too complex for your management
- In case of persistent haemorrhage despite following these guidelines, please contact your local emergency department for assistance

Definitions

International Normalised Ratio (INR): A system established by the World Health Organization (WHO) and the International Committee on Thrombosis and Hemostasis for reporting the results of blood coagulation (clotting) tests

Non-steroidal Anti-inflammatory Drugs (NSAIDs): A class of analgaesic medicine that relieves pain, swelling, stiffness, and inflammation through cyclooxygenase inhibition.

Novel oral anticoagulant (NOAC): Anticoagulants that directly target the enzymatic activity of thrombin and factor Xa

Direct Oral Anticoagulant(DOAC) = NOAC

Simple extractions: refers to those which are expected to be straightforward without surgical complications

Complex Extractions: refers to those which may be likely to have surgical complications

VKAs: Vitamin K Antagonists

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References and related documents

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Appendix

Appendix 1: *Common Anticoagulant and Antiplatelet Drugs Available in Australia (Used in an Outpatient Setting)*

Generic Medication Name	Common Brand Names
Oral Anticoagulants	
Warfarin	Coumadin®, Marevan®, Jantoven®
Dabigatran* (reversal agent available)	Pradaxa®
Rivaroxaban*	Xarelto®
Apixaban*	Eliquis®
Injectable Anticoagulants	
Unfractionated Heparin	Heparin, Heparin Sodium®
Dalteparin	Fragmin®, Fragmine®, Dalpin®
Fondaparinux	Arixtra®
Enoxaparin	Clexane®, Lovenox®, Klexane®
Danaparoid	Orgaran®
Nadroparine	Fraxiparine®
Antiplatelet	
Aspirin (irreversible inhibitor)	Solprin®, Cartia ®, Astrix®, DBL-Aspirin®, Cardiprin®
Clopidogrel (irreversible inhibitor)	Iscover®, Plavix®
Aspirin-clopidogrel	CoPlavix®, DuoCover®
Aspirin-dipyridamole	AsasantinSR®
Cilostazol (reversible effect)	Pletal®
Dipyridamole (reversible effect)	Persantin®, PersantinSR®
Prasugrel (irreversible inhibitor)	Effient®
Ticagrelor (reversible effect)	Brilinta®

*NOAC/DOAC

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Answer the following questions about what you have just read.
1 Scientific CPD point is available on completion.

YourName:

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Question 1
List 3 key issues this Clinical Guideline reinforced for you?

Question 2
Were there areas of the Clinical Guideline you were previously unaware of? If yes, please list them.

Question 3
How will you share this information with your peers?

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