CPG Invasive oral procedures involving bleeding in patients using antithrombotics

Version 1.0 – 12.12. 2019

SUMMARY

1. Introduction

There are many questions regarding the use of antithrombotics in invasive dental procedures involving bleeding. Patients using antithrombotics are at a higher risk of developing subsequent bleeding after invasive oral procedures involving bleeding. In the past, such patients were often advised to temporarily suspend the use of antithrombotics. This new guideline reveals that it is often better to continue the use of the antithrombotics. Temporary suspension does reduce the risk of subsequent bleeding in the mouth, however it increases the risk of a thromboembolic event elsewhere in the body.

2. Accountability

This clinical practice guideline (CPG) is intended for dentists, dental specialists and oral hygienists. Other (oral) healthcare providers are also at liberty to use this guideline to their own benefit. This guideline has been developed at the initiative of the Kennisinstituut Mondzorg (KIMO) (Institute of Expertise for Oral Healthcare) by a Clinical Practice Guideline panel (CPG panel) presided over by prof. dr. F. R. Rozema, professor of oral medicine.

3. What are antithrombotics?

Antithrombotics are all agents that can prevent or treat thrombosis (a blood clot forming in an intact blood vessel). This concerns various types of drugs that can be subdivided into two categories: antiplatelets and anticoagulants.

Antithrombotics, relevant to dentistry and oral healthcare

Antiplatelets, specifically:
- Acetylsalicylic acid
- Carbasalate calcium
- Clopidogrel
- Dipyridamole
- Prasugrel
- Ticagrelor

Anticoagulants (anticoagulant drugs), specifically:
- Vitamin K antagonists (VKA), specifically acenocoumarol and fenprocoumon
- Direct-Acting Oral Anticoagulants (DOAC), specifically apixaban, dabigatran, edoxaban en rivaroxaban
- Low molecular weight heparin (LMWH)

4. Clinical questions

Five clinical questions have been drawn up for this. These questions and the ensuing recommendations have been summarised as follows:

Clinical question 1. ***What is the risk of bleeding from invasive oral and dental procedures in patients using antithrombotics and what is the recommended policy regarding suspending the use thereof?***

Recommendations:

The table below indicates which option is recommended per procedure and per antithrombotic. In most cases the advice is to not suspend the treatment with antithrombotics. The recommendation for certain combinations of antithrombotic drugs is to contact the anticoagulation clinic, the anticoagulation centre of expertise or the prescriber of the drugs in question.
The INR value is important for the group of vitamin K antagonists. If this value is too high, consultation with the anticoagulation clinic/ the anticoagulation centre of expertise is recommended.

Medication → **Procedures ↓**	**Antiplatelets** **DOAC** (directly-acting oral anticoagulants) **Regular use LMWH** (low molecular weight heparins)	**VKA** (vitamin K-antagonists)	**Combinations (including combinations of antiplatelets)**
• **Extraction of tooth/teeth** • **Periodontal procedure** • **Placement of a dental implant** • **Taking a biopsy** • **Surgical removal of tooth/teeth** • **Root apex resection** • **Sinus floor elevation** • **Peri-implant surgery**	**Do not suspend, but**: 1. **Consider** supplementary measures (for example, reducing the wound surface, doing the treatment in phases, suturing in resorbable wound dressings) in cases where multiple factors that might increase the risk of bleeding are present (see below) 2. **Consult** the prescriber of the medication and/or anticoagulation clinic/centre of expertise if the measures described under "**1**" are anticipated to be insufficient	• **Do not suspend at INR ≤3,5, determination of max. 24 hours old, but** 1. **Consider** supplementary measures (for example, reducing the wound surface, doing the treatment in phases, suturing in resorbable wound dressings) in cases where multiple factors that might increase the risk of bleeding are present (see below) 2. **Consult** the prescriber of the medication and/or anticoagulation clinic/centre of expertise if the measures described under **"1"** are anticipated to be insufficient • **In case of INR >3,5 or INR-determination >24 hours old: consult** anticoagulation clinic/centre of expertise	• **In combinations with VKA or LMWH: consult** the anticoagulation clinic/centre of expertise • **For other combinations: consult** the prescriber to check whether it is safe to adjust the medication for a short period of time
Abscess incision	If in doubt**, consult** the Oral and Maxillofacial Surgeon		
Conduction anaesthesia	**Do not suspend**		

There are factors that increase the risk of bleeding, for example:

- a treatment that is expected to be complicated
- a large wound surface
- no possibility of primary closure of the wound
- an infected wound area
- no possibility of wound compression
- a vulnerable patient.

If combinations of these factors are involved, the recommendation is to adjust the treatment by for example, performing this in phases or by consulting the prescriber of the anticoagulation medication or the anticoagulation clinic/ the anticoagulation centre of expertise.

Clinical question 2: ***Is the use of local measures for the prevention of serious subsequent bleeding indicated in patients using antithrombotics and undergoing invasive oral or dental procedures?***

Recommendations:

Suturing after a procedure is recommended in all cases. In addition to this, rinsing the wound with tranexamic acid 5% after the procedure or having the patient bite down on a gauze drenched in this solution, is recommended. This advice does not apply to patients using a single antiplatelet(also referred to as 'mono' antiplatelet). The recommendation is not to rinse the mouth (not even with disinfecting fluids) if tranexamic acid is used. Other local measures are not recommended routinely.

Clinical question 3: ***What information does the patient need in order to be able to come to a decision regarding adjusting the use of antithrombotic medication for an invasive dental or oral procedure?***

Recommendation:

The oral healthcare provider should inform patients regarding the risks of either continuing or suspending the use of antithrombotics when undergoing an invasive procedure. A recommendation to temporarily suspend use (see clinical question 1) should be accompanied by advice regarding restarting use of the antithrombotics.

Clinical question 4: ***how are tasks allocated within the chain?***

See flowchart on page 5

Clinical question 5: ***Is the post-operative prescription of NSAID's as pain relief medication justifiable in patients using antithrombotics who have undergone an oral or dental invasive procedure involving bleeding?***

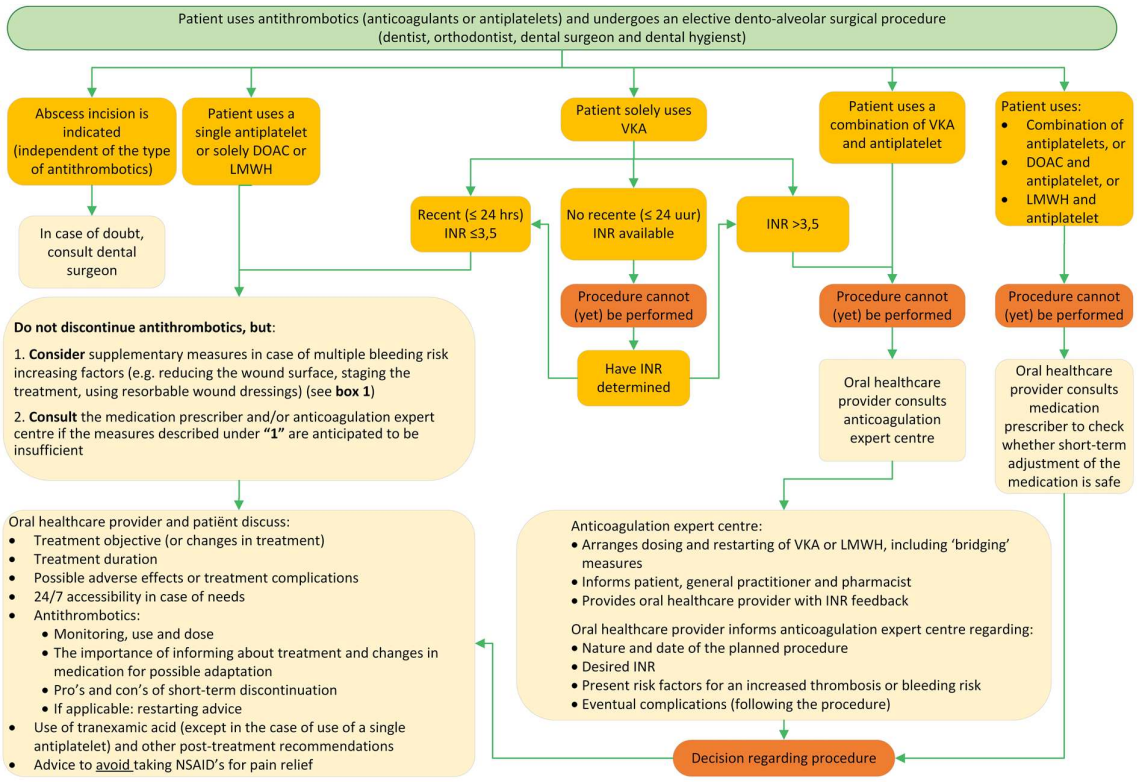
Recommendation:

The prescription of NSAID's is not recommended due to the additionally increased risk of subsequent bleeding and the availability of alternative pain relief measures. The oral healthcare provider should also make patients aware of the fact that several over the counter (OTC) pain relief drugs contain NSAIDs and that the use therefore is also discouraged.

5. Comprehensive guideline

The comprehensive clinical practice guideline for Invasive dental procedures involving bleeding in patients using antithrombotics can be found at ***https://www.hetkimo.nl/richtlijnen/antitrombotica/introductie/***

Please note that the comprehensive version of this guideline is in Dutch.



The allocation of tasks is shown in this flow chart:

Abbreviations:

DOAC : direct-acting oral anticoagulant
INR : International Normalized Ratio
LMWH : low molecular weight heparins
VKA : vitamin K antagonist