Complete Summary

GUIDELINE TITLE

Guideline for the management of patients on oral anticoagulants requiring dental surgery.

BIBLIOGRAPHIC SOURCE(S)

Perry DJ, Nokes TJ, Heliwell PS. Guidelines for the management of patients on oral anticoagulants requiring dental surgery. London (UK): British Committee for Standards in Haematology; 2007. 15 p. [20 references]

GUIDELINE STATUS

This is the current release of the guideline.

** REGULATORY ALERT **

FDA WARNING/REGULATORY ALERT

Note from the National Guideline Clearinghouse: This guideline references a drug(s) for which important revised regulatory and/or warning information has been released.

- August 16, 2007, Coumadin (Warfarin): Updates to the labeling for Coumadin to include pharmacogenomics information to explain that people's genetic makeup may influence how they respond to the drug.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Dental conditions requiring outpatient invasive procedures while on concomitant anticoagulation, including:

- Endodontics (root canal treatment)
- Periodontal surgery
- Oral biopsy
- Local anaesthesia (infiltrations, inferior alveolar block, mandibular blocks)
- Extractions (single and multiple)
- Oral surgery or subgingival scaling

GUIDELINE CATEGORY

Management
Prevention
Treatment

CLINICAL SPECIALTY

Cardiology
Dentistry
Hematology

INTENDED USERS

Dentists
Physicians

GUIDELINE OBJECTIVE(S)

To provide healthcare professionals including primary care dental practitioners with clear guidance on the management of patients on oral anticoagulants requiring dental surgery

TARGET POPULATION

Patients in the United Kingdom on oral anticoagulation who need out-patient dental surgery

INTERVENTIONS AND PRACTICES CONSIDERED

1. Patient-procedure risk assessment
2. Use of prophylactic antibiotics (amoxicillin, ampicillin, clindamycin, azithromycin)
3. Local hemostasis (e.g. tranexamic acid wash, oxidized cellulose ['Surgicel'], collagen sponges, sutures)
4. Measurement of international normalized ratio (INR)

5. Use of anti-inflammatory drugs (non-steroidal anti-inflammatory drugs [NSAIDs], cyclo oxygenase-2 [COX-2] inhibitors) (not recommended)

MAJOR OUTCOMES CONSIDERED

- Morbidity and mortality from discontinuation of anticoagulation therapy
- Extent of bleeding

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

MEDLINE and EMBASE were searched systematically for publications in English from 1950–2006 using the key words: dental, surgery, oral and anticoagulants.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Classification of Evidence Levels

Ia Evidence obtained from meta-analysis of randomised controlled trials.

Ib Evidence obtained from at least one randomised controlled trial.

IIa Evidence obtained from at least one well-designed controlled study without randomisation.

IIb Evidence obtained from at least one other type of well-designed quasi-experimental study (a situation in which implementation of an intervention is without the control of the investigators, but an opportunity exists to evaluate its effect).

III Evidence obtained from well-designed non-experimental descriptive studies, such as comparative studies, correlation studies and case studies.

IV Evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities.

METHODS USED TO ANALYZE THE EVIDENCE

Review
Review of Published Meta-Analyses

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

- The guideline group was selected to be representative of United Kingdom based medical experts and patients representatives.
- The writing group produced the draft guideline, which was subsequently revised by consensus by members of the Haemostasis and Thrombosis Task Force of the British Committee for Standards in Haematology.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Classification of Grades of Recommendations

Grade A - Requires at least one randomised controlled trial as part of a body of literature of overall good quality and consistency addressing specific recommendation. *(Evidence levels Ia, Ib)*.

Grade B - Requires the availability of well conducted clinical studies but no randomised clinical trials on the topic of recommendation. *(Evidence levels IIa, IIb, III)*.

Grade C - Requires evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities. Indicates an absence of directly applicable clinical studies of good quality. *(Evidence level IV)*.

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

External Peer Review
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

The guideline was reviewed by a sounding board of approximately 100 United Kingdom haematologists, the British Committee for Standards in Haematology (BCSH), the British Society for Haematology Committee, the British Dental Association (BDA), the National Patient Safety Agency (NPSA) and comments incorporated where appropriate.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Recommendation grades (**A-C**) and levels of evidence (**Ia-IV**) are defined at the end of the "Major Recommendations" field.

1. The risk of significant bleeding in patients on oral anticoagulants and with a stable international normalised ratio (INR) in the therapeutic range 2-4 (i.e., <4) is very small and the risk of thrombosis may be increased in patients in whom oral anticoagulants are temporarily discontinued. Oral anticoagulants should not be discontinued in the majority of patients requiring out-patient dental surgery including dental extraction (**Grade A Level Ib**).
2. Recommendations: For patients stably anticoagulated on warfarin (INR 2-4) and who are prescribed a single dose of antibiotics as prophylaxis against endocarditis, there is no necessity to alter their anticoagulant regimen (**Grade C, Level IV**).
3. The risk of bleeding may be minimised by:
    a. The use of oxidised cellulose (Surgicel) or collagen sponges and sutures (**Grade B, Level IIb**).
    b. 5% tranexamic acid mouthwashes used four times a day for 2 days (**Grade A, Level Ib**). Tranexamic acid is not readily available in most primary care dental practices.

4. For patients who are stably anticoagulated on warfarin, a check INR is recommended 72 hours prior to dental surgery (**Grade A, Level Ib**)
5. Patients taking warfarin should not be prescribed non-selective non-steroidal anti-inflammatory drugs (NSAIDs) and cyclo oxygenase-2 (COX-2) inhibitors as analgesia following dental surgery (**Grade B, Level III**).

Definitions:

Classification of Evidence Levels

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IIb Evidence obtained from at least one other type of well-designed quasi-experimental study (a situation in which implementation of an intervention is without the control of the investigators, but an opportunity exists to evaluate its effect).

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Classification of Grades of Recommendations

Grade A - Requires at least one randomised controlled trial as part of a body of literature of overall good quality and consistency addressing specific recommendation. *(Evidence levels Ia, Ib)*.

Grade B - Requires the availability of well conducted clinical studies but no randomised clinical trials on the topic of recommendation. *(Evidence levels IIa, IIb, III)*.

Grade C - Requires evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities. Indicates an absence of directly applicable clinical studies of good quality. *(Evidence level IV)*.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for each recommendation (see "Major Recommendations").

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate management of patients on oral anticoagulants requiring dental surgery

POTENTIAL HARMS

Potentially increased risk of serious postoperative bleeding

QUALIFYING STATEMENTS

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- While the advice and information in these guidelines is believed to be true and accurate at the time of going to press, neither the authors, the British Society

for Haematology nor the publishers accept any legal responsibility for the content of these guidelines.
- The guidance may not be appropriate in all cases and individual patient circumstances may dictate an alternative approach.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Living with Illness

IOM DOMAIN

Effectiveness
Safety

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2007

GUIDELINE DEVELOPER(S)

British Committee for Standards in Haematology - Professional Association

SOURCE(S) OF FUNDING

British Committee for Standards in Haematology

GUIDELINE COMMITTEE

Not stated

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Authors: Perry DJ, Addenbrookes Hospital, Hills Road, Cambridge, UK; Nokes TJC, Derriford Hospital NHS Trust, Plymouth, UK; Heliwell PS, National Patient Safety Agency (NPSA)

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available from the British Committee for Standards in Haematology Web site.

Print copies: Available from the British Committee for Standards in Haematology; Email: bcsh@b-s-h.org.uk.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI Institute on March 18, 2008. The information was verified by the guideline developer on April 1, 2008.

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Date Modified: 10/6/2008