Complete Summary

GUIDELINE TITLE

Guideline for laboratory diagnosis of malaria.

BIBLIOGRAPHIC SOURCE(S)

Bailey JW, Williams J, Bain BJ, Parker-Williams J, Chiodini P, General Haematology Task Force. Guideline for laboratory diagnosis of malaria. London (UK): British Committee for Standards in Haematology; 2007. 19 p. [10 references]

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Malaria

GUIDELINE CATEGORY

Diagnosis

CLINICAL SPECIALTY

Hematology
Infectious Diseases

INTENDED USERS

Clinical Laboratory Personnel
Physicians

GUIDELINE OBJECTIVE(S)

To recommend adequate techniques and adequate training and experience that will improve accurate malaria diagnosis

TARGET POPULATION

Patients in the United Kingdom with suspected malaria

INTERVENTIONS AND PRACTICES CONSIDERED

Primary Testing

1. Thick film microscopy
2. Thin film microscopy
3. Preparation times and temperatures
4. Fixative (acetone, methanol)
5. Stain (Giemsa, Leishman's, Field's, May-Grunwald-Giemsa [MGG], modified Field's)
6. Quantification of parasites
7. Confirmation of diagnosis and species
8. Referral to a reference laboratory
9. Repeat testing
10. Handling high-risk blood samples

Supplementary Testing

1. Rapid antigen detection (immunochromatographic tests) – Binax NOW® and OptiMal-IT
2. Quantitative buffy coat (QBC) blood parasite detection
3. Polymerase chain reaction (PCR)
4. Drug sensitivity (research only)

Quality Control (QC)

1. Internal QC
2. External QC (National External Quality Assessment Scheme)
3. Clinical Pathology Accreditation
4. Reference laboratory confirmation
5. Personnel training

MAJOR OUTCOMES CONSIDERED

Sensitivity and specificity of test procedures

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Not stated

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Not stated

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

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

METHOD OF GUIDELINE VALIDATION

Not stated

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not applicable

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

- The routine use of thick and thin films is advised for malaria diagnosis. Thick films should be exposed to acetone for 10 minutes then stained without further fixation, using Giemsa or Field's stain. Thin films should be exposed to acetone for 1 minute and then either stained with a Leishman stain (methanol based) or methanol fixed and stained with a Giemsa stain. Thick films should be examined for an adequate period of time by two observers.
- If thick films are positive, the species should be determined by examination of a thin film. In the case of *Plasmodium falciparum* infection, the percentage of parasitised cells should be estimated.
- Rapid antigen detection tests (immunochromatographic tests) cannot replace microscopy but are indicated as a supplementary test when malaria diagnosis is being performed by relatively inexperienced staff (e.g., in low prevalence areas and outside normal working hours).

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Accurate qualitative and quantitative diagnosis of malaria

POTENTIAL HARMS

Not stated

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
Timeliness

IDENTIFYING INFORMATION AND AVAILABILITY

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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: J. W Bailey; J. Williams; B. J. Bain; J Parker-Williams; P. Chio

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: 11/3/2008