# Complete Summary

## GUIDELINE TITLE

Placenta praevia and placenta praevia accreta: diagnosis and management.

## BIBLIOGRAPHIC SOURCE(S)

Royal College of Obstetricians and Gynaecologists (RCOG). Placenta praevia and placenta praevia accreta: diagnosis and management. London (UK): Royal College of Obstetricians and Gynaecologists (RCOG); 2005 Oct. 12 p. (Guideline; no. 27). [97 references]

## GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Royal College of Obstetricians and Gynaecologists (RCOG). Placenta praevia: diagnosis and management. London (UK): Royal College of Obstetricians and Gynaecologists (RCOG); 2001 Jan.

## COMPLETE SUMMARY CONTENT

SCOPE
METHODOLOGY - including Rating Scheme and Cost Analysis
RECOMMENDATIONS
EVIDENCE SUPPORTING THE RECOMMENDATIONS
BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS
QUALIFYING STATEMENTS
IMPLEMENTATION OF THE GUIDELINE
INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES
IDENTIFYING INFORMATION AND AVAILABILITY
DISCLAIMER

## SCOPE

### DISEASE/CONDITION(S)

Placenta praevia and placenta praevia accreta

### GUIDELINE CATEGORY

Diagnosis
Evaluation
Management
Treatment

## CLINICAL SPECIALTY

Family Practice
Obstetrics and Gynecology

## INTENDED USERS

Advanced Practice Nurses
Nurses
Physician Assistants
Physicians

## GUIDELINE OBJECTIVE(S)

To address the methods of diagnosing placenta praevia and placenta praevia accreta and their clinical management in both the antenatal and peripartum periods

## TARGET POPULATION

Pregnant women

## INTERVENTIONS AND PRACTICES CONSIDERED

### Diagnosis/Screening

1. Physical examination and assessment of signs and symptoms
2. Transvaginal ultrasound
3. Antenatal imaging by colour flow Doppler ultrasonography

### Management

1. Hospitalisation (at 34 weeks gestation for women who have previously bled)
2. Counselling and outpatient care (at 34 weeks gestation for asymptomatic women)
3. Making decisions on mode of delivery
    - Cesarean section
    - Vaginal delivery
4. Autologous blood transfusion (considered but not recommended)
5. Cell salvage (in cases at high risk of massive hemorrhage)
6. Choice of anaesthetic technique, including regional blockade
7. Surgery with consultant anaesthetic and obstetric input and availability of high-volume blood transfusion
8. Conservative management
9. Management of massive haemorrhage

## MAJOR OUTCOMES CONSIDERED

- Maternal and fetal morbidity
- Sensitivity and specificity of diagnostic tests

## METHODOLOGY

### METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Searches of Electronic Databases

### DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The Cochrane Library 2004, Issue 2, and Embase and Medline were searched for relevant randomised controlled trials (RCTs), systematic reviews, and meta-analyses relating to placenta praevia from 2000 to 2004 (the search for the previous guidelines was up to April 2000). The last search was performed in May 2004. The searches were performed using the Medical Subject Headings (MeSH) "placenta praevia" and "placenta accreta."

The majority of publications on placenta praevia are retrospective studies, case reports, and reviews, with a paucity of prospective studies and randomised trials or meta-analyses. Since the last guideline was written, there have been over 80 case reports featuring over 130 women with varying degrees of morbidly adherent placentas. These represent wide international experience and concern with this condition.

In addition to the above, during the peer review process the Confidential Enquiry into Maternal Deaths in the UK was published and, as it made important points regarding placenta praevia, this information has been included.

### 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

**Levels of Evidence**

**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

**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 experience of respected authorities

## METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses
Systematic Review with Evidence Tables

## 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

Not stated

## RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

The recommendations were graded according to the level of evidence upon which they were based. The grading scheme used was based on a scheme formulated by the Clinical Outcomes Group of the National Health Service (NHS) Executive.

**Grade A** - Requires at least one randomised controlled trial as part of a body of literature of overall good quality and consistency addressing the 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 recommendations (evidence levels IIa, IIb, III)

**Grade C** - Requires evidence obtained from expert committee reports or opinions and/or clinical experience 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

Following discussion in the Guidelines and Audit Committee, each green-top guideline is formally peer reviewed. At the same time the draft guideline is published on the Royal College of Obstetricians and Gynaecologists (RCOG) Web site for further peer discussion before final publication.

The names of author(s) and nominated peer reviewers are included in the original guideline document.

# RECOMMENDATIONS

## MAJOR RECOMMENDATIONS

*In addition to these evidence-based recommendations, the guideline development group also identifies points of best clinical practice in the original guideline document.*

Levels of evidence (**Ia-IV**) and grading of recommendations (**A-C**) are defined at the end of the "Major Recommendations" field.

### Screening and Diagnosis

While clinical acumen remains vitally important in suspecting and managing placenta praevia, the definitive diagnoses of most low-lying placentas is now achieved with ultrasound imaging. Clinical suspicion should, however, be raised in any woman with vaginal bleeding and a high presenting part or an abnormal lie, irrespective of previous imaging results.

### Ultrasound Imaging in Screening for Low-Lying Placenta and Diagnosing Placenta Praevia

**B** - Transvaginal ultrasound is safe in the presence of placenta praevia and is more accurate than transabdominal ultrasound in locating the placenta.

**C** - A reasonable antenatal imaging policy is to perform a transvaginal ultrasound scan on all women in whom a low-lying placenta is suspected from their transabdominal anomaly scan (at approximately 20-24 weeks) to reduce the numbers of those for whom follow-up will be needed.

**C** - A further transvaginal scan is required for all women whose placenta reaches or overlaps the cervical os at their anomaly scan as follows:

- Women who bleed should be managed individually according to their needs.
- In cases of asymptomatic suspected minor praevia, follow-up imaging can be left until 36 weeks.

- In cases with asymptomatic suspected major placenta praevia, a transvaginal ultrasound scan should be performed at 32 weeks, to clarify the diagnosis and allow planning for third-trimester management and delivery.

**Diagnosis of a Morbidly Adherent Placenta**

**C** - Antenatal imaging by colour flow Doppler ultrasonography should be performed in women with placenta praevia who are at increased risk of placenta accreta. Where this is not possible locally, such women should be managed as if they have placenta accreta until proven otherwise.

Women with placenta praevia are at increased risk of having a morbidly adherent placenta if they have an anterior placenta praevia and have previously been delivered by caesarean section, especially when there has been a short caesarean to conception interval. Antenatal imaging can help to establish a diagnosis in such cases and techniques used include ultrasound imaging, power amplitude ultrasonic angiography, magnetic resonance imaging (MRI), and colour flow Doppler.

Imaging antenatally allows for preparation for surgery but false positives do occur and the diagnosis should be confirmed intraoperatively to avoid inappropriate treatment.

**Antenatal Management**

**C** - Women with major placenta praevia who have previously bled should be admitted and managed as inpatients from 34 weeks of gestation. Those with major placenta praevia who remain asymptomatic, having never bled, require careful counselling before contemplating outpatient care. Any home-based care requires close proximity with the hospital, the constant presence of a companion, and full informed consent from the woman.

**Delivery**

**B** - The mode of delivery should be based on clinical judgement supplemented by sonographic information. A placental edge less than 2 cm from the internal os is likely to need delivery by caesarean section, especially if it is posterior or thick.

**B** - There is no evidence to support the use of autologous blood transfusion for placenta praevia.

**C** - Cell salvage may be considered in cases at high risk of massive haemorrhage.

**B** - The choice of anaesthetic technique for caesarean section for placenta praevia must be made by the anaesthetist, in consultation with the obstetrician and mother, but there is increasing evidence to support the safety of regional blockade.

**Surgery in the Presence of Placenta Accreta, Increta, and Percreta**

**C** - Women with placenta praevia who have had a previous caesarean section are at high risk of having a morbidly adherent placenta and should have been imaged antenatally. When placenta accreta is thought to be likely, consultant anaesthetic and obstetric input are vital in planning and conducting the delivery. Crossed matched blood should be available and colleagues from other specialties/subspecialties may be alerted to be on standby to attend as needed.

**B** - Conservative management of placenta praevia accreta can be successful and can preserve fertility. This can involve a number of different management strategies, which are outlined in the original guideline document, but precise recommendations are outside the scope of this guideline.

**Massive Haemorrhage**

**C** - Massive haemorrhage should be dealt with in accordance with the recommendations of the reports of the Confidential Enquiries into Maternal Deaths.

Uterotonic agents may help in reducing the blood loss associated with bleeding from the relatively atonic lower uterine segment, while bimanual compression, hydrostatic balloon catheterization, or uterine packing, or even aortic compression, can buy time while senior help arrives. Additional surgical manoeuvres which may be considered include the B-Lynch suture, uterine or internal iliac artery ligation, or hysterectomy. Arterial embolisation has been reported and is useful in selected cases as long as the iliac vessels have not been tied off.

**Risk Management**

As in all high-risk cases, particular attention should be paid to careful documentation of all issues surrounding clinical discussion and decisions. Names of all clinical staff involved should be recorded legibly and signed in the notes, together with the content of any discussions, advanced directives, and decisions.

**Definitions**:

**Grading 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 the 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 recommendations (evidence levels IIa, IIb, III)

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**Levels of Evidence**

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**IV**: Evidence obtained from expert committee reports or opinions and/or clinical experience of respected authorities

### 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" field).

## BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

### POTENTIAL BENEFITS

Appropriate diagnosis, management, and treatment of placenta previa to reduce maternal and fetal morbidity

### POTENTIAL HARMS

- Risk of false-positive and false-negative results of diagnostic imaging
- Haemorrhagic complications of surgery

## QUALIFYING STATEMENTS

### QUALIFYING STATEMENTS

- Clinical guidelines are "systematically developed statements which assist clinicians and patients in making decisions about appropriate treatment for specific conditions." Each guideline is systematically developed using a standardised methodology. Exact details of this process can be found in Clinical Governance Advice No. 1: Guidance for the Development of Royal

College of Obstetricians & Gynaecologists (RCOG) Green-top Guidelines. (See the "Availability of Companion Documents" field in this summary.)
- These recommendations are not intended to dictate an exclusive course of management or treatment. They must be evaluated with reference to individual patient needs, resources and limitations unique to the institution, and variations in local populations. It is hoped that this process of local ownership will help to incorporate these guidelines into routine practice. Attention is drawn to areas of clinical uncertainty where further research may be indicated.

## IMPLEMENTATION OF THE GUIDELINE

### DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

### IMPLEMENTATION TOOLS

Audit Criteria/Indicators

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

## INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

### IOM CARE NEED

Getting Better

### IOM DOMAIN

Effectiveness
Patient-centeredness

## IDENTIFYING INFORMATION AND AVAILABILITY

### BIBLIOGRAPHIC SOURCE(S)

Royal College of Obstetricians and Gynaecologists (RCOG). Placenta praevia and placenta praevia accreta: diagnosis and management. London (UK): Royal College of Obstetricians and Gynaecologists (RCOG); 2005 Oct. 12 p. (Guideline; no. 27). [97 references]

### ADAPTATION

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

### DATE RELEASED

2001 Jan (revised 2005 Oct)

## GUIDELINE DEVELOPER(S)

Royal College of Obstetricians and Gynaecologists - Medical Specialty Society

## SOURCE(S) OF FUNDING

Royal College of Obstetricians and Gynaecologists

## GUIDELINE COMMITTEE

Guidelines and Audit Committee

## COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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## FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Guideline authors are required to complete a "declaration of interests" form.

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## GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the Royal College of Obstetricians and Gynaecologists (RCOG) Web site.

Print copies: Available from the Royal College of Obstetricians and Gynaecologists (RCOG) Bookshop, 27 Sussex Place, Regent's Park, London NW1 4RG; Telephone: +44 020 7772 6276; Fax, +44 020 7772 5991; e-mail: bookshop@rcog.org.uk. A listing and order form are available from the RCOG Web site.

## AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

- Guidance for the development of RCOG green-top guidelines. Clinical Governance Advice No 1. 2000 Jan. Available from the Royal College of Obstetricians and Gynaecologists (RCOG) Web site.
- Searching for evidence. Clinical Governance Advice No 3. 2001 Oct. Available from the Royal College of Obstetricians and Gynaecologists (RCOG) Web site.

Additionally, auditable standards can be found in section 9 of the original guideline document.

## PATIENT RESOURCES

None available

## NGC STATUS

This NGC summary was completed by ECRI on March 10, 2006. The information was verified by the guideline developer on April 26, 2006.

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