Complete Summary

GUIDELINE TITLE

The management of third- and fourth-degree perineal tears.

BIBLIOGRAPHIC SOURCE(S)

Royal College of Obstetricians and Gynaecologists (RCOG). The management of third- and fourth-degree perineal tears. London (UK): Royal College of Obstetricians and Gynaecologists (RCOG); 2007 Mar. 11 p. (Green-top guideline; no. 29). [55 references]

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Royal College of Obstetricians and Gynaecologists (RCOG). The management of third- and fourth-degree perineal tears. London (UK): Royal College of Obstetricians and Gynaecologists (RCOG); 2001 Jul.

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SCOPE

DISEASE/CONDITION(S)

Perineal trauma (third- and fourth-degree perineal tears) sustained during childbirth

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 provide evidence-based guidance on the diagnosis, management, and treatment of obstetric anal sphincter injury

TARGET POPULATION

Women who sustain obstetric and sphincter injuries (third- and fourth-degree perineal tears) during vaginal delivery

INTERVENTIONS AND PRACTICES CONSIDERED

Diagnosis/Risk Assessment

1. Prediction and prevention of obstetric anal sphincter injury
    - Assessment of risk factors for obstetric anal sphincter injury
    - Mediolateral technique for episiotomy
2. Assessment and identification of obstetric and anal sphincter injury
3. Classification of obstetric and anal sphincter injury

Management/Treatment

1. Surgical techniques
    - Repair of external sphincter using overlapping or end-to-end [approximation] method)
    - Repair of third- and fourth-degree tears in operating theater under regional or general anesthesia
2. Choice of suture materials
    - Repair of the EAS muscle (monofilament sutures, modern braided sutures)
    - Repair of the internal anal sphincter muscle (fine sutures)
3. Postoperative management
    - Postoperative laxatives
4. Counseling regarding prognosis following surgical repair

MAJOR OUTCOMES CONSIDERED

- Incidence of third- and fourth-degree perineal tears
- Long-term anal continence rate

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The Cochrane Library and Cochrane Register of Controlled Trials were searched for relevant randomised controlled trials, systematic reviews, and meta-analysis. A search of Medline and PubMed (electronic database) from 1966 to 2006 was also carried out. The date of the last search was May 2006. The databases were searched using the relevant Medical Subject Heading (MeSH) terms, including all subheadings, and this was combined with a keyword search including: "human," "female," "childbirth," "obstetric," "perineum," "third degree," "fourth degree," "anal sphincter," "tear," "injury," "rupture," "damage," "incontinence," "faecal," "anal," "repair," "surgery," "sutures."

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-analyses 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 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 controlled 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 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

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 Web site for further peer review 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.

Prediction and Prevention of Obstetric Anal Sphincter Injury

Can Obstetric Anal Sphincter Injury Be Predicted and Prevented?

B - Where episiotomy is indicated, the mediolateral technique is recommended, with careful attention to the angle cut away from the midline.

Risk factors for third-degree tears have been identified in a number of retrospective studies. Taking an overall risk of 1% of vaginal deliveries, the following factors are associated with an increased risk of a third-degree tear:

- Birth weight over 4 kg (up to 2%)
- Persistent occipitoposterior position (up to 3%)
- Nulliparity (up to 4%)
- Induction of labour (up to 2%)
- Epidural analgesia (up to 2%)
- Second stage longer than 1 hour (up to 4%)
- Shoulder dystocia (up to 4%)
- Midline episiotomy (up to 3%)
- Forceps delivery (up to 7%)

Classification and Terminology

How Should Obstetric Anal Sphincter Injury Be Classified?

C - It is recommended that the classification outlined in this guideline be used when describing any obstetric anal sphincter injury.

The following classification, described by Sultan*, has been adopted by the International Consultation on Incontinence and the Royal College of Obstetricians and Gynaecologists. (Evidence level IV)

*Sultan AH, Editorial: obstetric perineal injury and anal incontinence. *Clin Risk* 1999;5:178-80.

First degree	Injury to perineal skin only
Second degree	Injury to perineum involving perineal muscles but not involving the anal sphincter
Third degree	Injury to perineum involving the anal sphincter complex: 3a: Less than 50% of external anal sphincter (EAS) thickness torn 3b: More than 50% of EAS thickness torn 3c: Both EAS and internal anal sphincter (IAS) torn
Fourth degree	Injury to perineum involving the anal sphincter complex (EAS and IAS) and anal epithelium.

If the tear involves only anal mucosa with intact anal sphincter complex (buttonhole tear), this has to be documented as a separate entity. If not recognised and repaired, this type of a tear may cause anovaginal fistulae.

Identification of Obstetric Anal Sphincter Injuries

How Can the Identification of Obstetric Anal Sphincter Injuries Be Improved?

C - All women having a vaginal delivery with evidence of genital tract trauma should be examined systematically to assess the severity of damage prior to suturing.

Surgical Techniques

Which Techniques Should Be Used to Accomplish the Repair of Obstetric Anal Sphincter Injury?

A - For repair of the external anal sphincter, either an overlapping or end-to-end (approximation) method can be used, with equivalent outcome. Where the IAS can be identified, it is advisable to repair separately with interrupted sutures.

Repair of third- and fourth-degree tears should be conducted in an operating theatre, under regional or general anaesthesia.

Choice of Suture Materials

Which Suture Materials Should Be Used to Accomplish Repair of Obstetric Anal Sphincter Injuries?

A - When repair of the EAS muscle is being performed, either monofilament sutures such as polydiaxanone (PDS) or modern braided sutures such as polyglactin (Vicryl®) can be used with equivalent outcome.

C - When repair of the IAS muscle is being performed, fine suture size such as 3-0 PDS and 2-0 Vicryl may cause less irritation and discomfort.

Postoperative Management

How Should Women With Obstetric Anal Sphincter Injury Be Managed Postoperatively?

C - The use of postoperative laxatives is recommended to reduce the incidence of postoperative wound dehiscence.

A systematic review addressing the antibiotic prophylaxis for fourth-degree perineal tear comparing prophylactic antibiotics with placebo or no antibiotics did not find any randomised controlled trials. However intraoperative and postoperative broad-spectrum antibiotics are recommended because the development of infection will pose a high risk of anal incontinence and fistula formation in the event of breakdown of the anal sphincter repair. Inclusion of metronidazole is advisable to cover the possible anaerobic contamination from faecal matter. (Evidence level IV)

There were no systematic reviews or randomised controlled trials to suggest the best method of follow-up after obstetric anal sphincter repair. It is helpful to review women in the postnatal period to discuss injury sustained during childbirth, assess for symptoms, and offer advice on how to seek help if symptoms develop, offer treatment and/or referral if indicated and advice on future mode of delivery.

If facilities are available, follow-up of women with obstetric anal sphincter injury should be in a dedicated perineal clinic with access to endoanal ultrasonography and anal manometry, as this can aid decision on future delivery. (Evidence level IV)

Prognosis

What Is the Prognosis Following Surgical Repair?

A - Women should be advised that the prognosis following EAS repair is good, with 60–80% asymptomatic at 12 months. Most women who remain symptomatic describe incontinence of flatus or faecal urgency.

Future Deliveries

What Advice Should Women Be Given Following an Obstetric Anal Sphincter Injury Concerning Future Pregnancies and Mode of Delivery?

All women who have suffered an obstetric anal sphincter injury should be counselled at the booking visit regarding the mode of delivery and this should be clearly documented in the notes. If the woman is symptomatic or shows abnormal anorectal manometric or endoanal ultrasonographic features, it may be advisable to offer an elective caesarean section.

Risk Management

What Processes and Policies Should Be in Place for Women Who Have Sustained Obstetric and Sphincter Injury?

There is a steady increase in litigation related to obstetric anal sphincter injury. The majority are related to failure to identify the injury after delivery, leading to subsequent anal incontinence and rectovaginal fistulae. At present, the occurrence of obstetric anal sphincter injury is not considered substandard care because it is a known complication of vaginal delivery. However, failure to recognise anal sphincter damage and to carry out a repair may be considered substandard care. Poor technique, poor materials or poor healing may cause a repair to fail. Clear documentation and patient counselling are of utmost importance. A patient information leaflet is recommended.

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 controlled clinical studies but no randomised clinical trials on the topic of recommendations. (Evidence levels IIa, IIb, III)

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Levels of Evidence

Ia: Evidence obtained from meta-analyses of randomised controlled trials

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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

Accurate diagnosis and appropriate management of third and fourth degree perineal trauma

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

- These 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 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)

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ADAPTATION

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

DATE RELEASED

2001 Jul (revised 2007 Mar)

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 of the Royal College of Obstetricians and Gynaecologists

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:

- Development of RCOG green-top guidelines: policies and processes. Clinical Governance Advice No 1a. 2006 Nov. Available from the Royal College of Obstetricians and Gynaecologists (RCOG) Web site.
- Development of RCOG green-top guidelines: producing a scope. Clinical Governance Advice No 1b. 2006 Nov. Available from the Royal College of Obstetricians and Gynaecologists (RCOG) Web site.
- Development of RCOG green-top guidelines: producing a clinical practice guideline. Clinical Governance Advice No 1c. 2006 Nov. 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 13 of the original guideline document.

PATIENT RESOURCES

None available

NGC STATUS

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Date Modified: 11/3/2008