Guideline Summary NGC-7959

Guideline Title

Vaginal birth after previous cesarean delivery.

Bibliographic Source(s)

American College of Obstetricians and Gynecologists (ACOG). Vaginal birth after previous cesarean delivery. Washington (DC): American College of Obstetricians and Gynecologists (ACOG); 2010 Aug. 14 p. (ACOG practice bulletin; no. 115). [136 references]

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: American College of Obstetricians and Gynecologists (ACOG). Vaginal birth after previous cesarean delivery. Washington (DC): American College of Obstetricians and Gynecologists (ACOG); 2004 Jul. 10 p. (ACOG practice bulletin; no. 54). [105 references]

Scope

Disease/Condition(s)

Vaginal birth after previous cesarean delivery

Guideline Category

Counseling

Management

Prevention

Risk Assessment

Clinical Specialty

Family Practice

Obstetrics and Gynecology

Intended Users

Advanced Practice Nurses

Nurses

Physician Assistants

Physicians

Guideline Objective(s)

- To aid practitioners in making decisions about appropriate obstetric and gynecologic care
- To review the current risks and benefits of a trial of labor after previous cesarean delivery (TOLAC) in various clinical situations and provide practical guidelines for managing and counseling patients who will give birth after a previous cesarean delivery

Target Population

Pregnant women who have had a previous cesarean delivery

Interventions and Practices Considered

1. Patient's obstetric history
2. Patient counseling regarding benefits and risks of vaginal birth after cesarean delivery (VBAC), trial of labor after previous cesarean deliver (TOLAC), and elective repeat cesarean delivery

3. Labor management including external cephalic version for breech presentation, use of epidural analgesia if desired by the patient, induction of labor for maternal or fetal indications, and delivery at facilities capable of emergency delivery

Note: Misoprostol for third trimester cervical ripening or labor induction in patients who have had a cesarean delivery or major uterine surgery was considered but not recommended.

Major Outcomes Considered

- Success rate for trials of labor after previous cesarean delivery (TOLAC)
- Rates of maternal complications, including uterine rupture or dehiscence, hemorrhage, infection, operative injury, thromboembolism, hysterectomy, and death
- Length of recovery period
- Rates of neonatal morbidity

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

The MEDLINE database, the Cochrane Library, and American College of Obstetricians and Gynecologists' (ACOG's) own internal resources and documents were used to conduct a literature search to locate relevant articles published between January 1985 and February 2010. The search was restricted to articles published in the English language. Priority was given to the articles reporting results of original research, although review articles and commentaries also were consulted. Abstracts of research presented at symposia and scientific conferences were not considered adequate for inclusion in this document.

Guidelines published by organizations or institutions such as the National Institutes of Health and ACOG were reviewed, and additional studies were located by reviewing bibliographies of identified articles. When reliable research was not available, expert opinions from obstetrician–gynecologists were used.

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

Studies were reviewed and evaluated for quality according to the method outlined by the U.S. Preventive Services Task Force.

I Evidence obtained from at least one properly designed randomized controlled trial.

II-1 Evidence obtained from well-designed controlled trials without randomization.

II-2 Evidence obtained from well-designed cohort or case-control analytic studies, preferably from more than one center or research group.

II-3 Evidence obtained from multiple time series with or without the intervention. Dramatic results in uncontrolled experiments also could be regarded as this type of evidence.

III Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees.

Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review

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

Analysis of available evidence was given priority in formulating recommendations. When reliable research was not available, expert opinions from obstetrician–gynecologists were used. See also the "Rating Scheme for the Strength of

Recommendations" field regarding Grade C recommendations.

Rating Scheme for the Strength of the Recommendations

Based on the highest level of evidence found in the data, recommendations are provided and graded according to the following categories:

Level A - Recommendations are based on good and consistent scientific evidence.

Level B - Recommendations are based on limited or inconsistent scientific evidence.

Level C - Recommendations are based primarily on consensus and expert opinion.

Cost Analysis

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

Method of Guideline Validation

Internal Peer Review

Description of Method of Guideline Validation

Practice Bulletins are validated by two internal clinical review panels composed of practicing obstetrician-gynecologists generalists and sub-specialists. The final guidelines are also reviewed and approved by the American College of Obstetricians and Gynecologists Executive Board.

Recommendations

Major Recommendations

The grades of evidence (**I–III**) and levels of recommendations (**A–C**) are defined at the end of "Major Recommendations" field.

The following recommendations are based on good and consistent scientific evidence (Level A):

- Most women with one previous cesarean delivery with a low transverse incision are candidates for and should be counseled about vaginal birth after cesarean delivery (VBAC) and offered a trial of labor after previous cesarean delivery (TOLAC).
- Epidural anesthesia for labor may be used as part of TOLAC.
- Misoprostol should not be used for third semester cervical ripening or labor induction in patients who have had a cesarean delivery or major uterine surgery.

The following recommendations are based on limited or inconsistent scientific evidence (Level B):

- Women with two previous low transverse cesarean deliveries may be considered candidates for TOLAC.
- Women with one previous cesarean delivery with a low transverse incision, who are otherwise appropriate candidates for twin vaginal delivery, may be considered candidates for TOLAC.
- External cephalic version for breech presentation is not contraindicated in women with a prior low transverse uterine incision who are at low risk for adverse maternal or neonatal outcomes from external cephalic version and TOLAC.
- Those at high risk for complications (e.g., those with previous classical or T-incision, prior uterine rupture, or extensive transfundal uterine surgery) and those in whom vaginal delivery is otherwise contraindicated (e.g., those with placenta previa) are not generally candidates for planned TOLAC.
- Induction of labor for maternal or fetal indications remains an option in women undergoing TOLAC.
- TOLAC is not contraindicated for women with previous cesarean delivery with an unknown uterine scar type unless there is a high clinical suspicion of a previous classical uterine incision.

The following recommendations are based primarily on consensus and expert opinion (Level C):

- A trial of labor after previous cesarean delivery should be undertaken at facilities capable of emergency deliveries. Because of the risks associated with TOLAC and that uterine rupture and other complications may be unpredictable, the College recommends that TOLAC be undertaken in facilities with staff immediately available to provide emergency care. When resources for immediate cesarean delivery are not available, the College recommends that health care providers and patients considering TOLAC discuss the hospital's resources and availability of obstetric, pediatric, anesthetic, and operating room staffs. Respect for patient autonomy supports that patients should be allowed to accept increased levels of risk; however, patients should be clearly informed of such potential increase in risk and management alternatives.
- After counseling, the ultimate decision to undergo TOLAC or a repeat cesarean delivery should be made by the patient in consultation with her health care provider. The potential risks and benefits of both TOLAC and elective repeat cesarean delivery should be discussed. Documentation of counseling and the management plan should be included in the medical record.

Definitions:

Level of Recommendations

Level A - The recommendation is based on good and consistent scientific evidence.

Level B - The recommendation is based on limited or inconsistent scientific evidence.

Level C - The recommendation is based primarily on consensus and expert opinion.

Grade of Evidence

I Evidence obtained from at least one properly designed randomized controlled trial

II-1 Evidence obtained from well-designed controlled trials without randomization

II-2 Evidence obtained from well-designed cohort or case-control analytic studies, preferably from more than one center or research group

II-3 Evidence obtained from multiple time series with or without the intervention. Dramatic results in uncontrolled experiments could also be regarded as this type of evidence.

III Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees

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

- Women who achieve vaginal birth after cesarean delivery (VBAC) avoid major abdominal surgery, resulting in lower rates of hemorrhage, infection, and a shorter recovery period compared with elective repeat cesarean delivery.
- For those considering larger families, VBAC may avoid potential future maternal consequences of multiple cesarean deliveries such as hysterectomy, bowel or bladder injury, transfusion, infection, and abnormal placentation such as placenta previa and placenta accreta.

Potential Harms

- The risks of either trial of labor after cesarean delivery (TOLAC) or elective repeat cesarean delivery include maternal hemorrhage, infection, operative injury, thromboembolism, hysterectomy, and death.
- A failed TOLAC is associated with more complications than elective repeat cesarean delivery.
- Uterine rupture or dehiscence is the outcome associated with TOLAC that most significantly increases the chance of additional maternal and neonatal morbidity.
- Neonatal morbidity is higher in the setting of a failed TOLAC than in a vaginal birth after cesarean delivery (VBAC).

Contraindications

Contraindications

Contraindications for Vaginal Birth after Cesarean Delivery

- Previous classical or T-shaped incision or extensive transfundal uterine surgery
- Previous uterine rupture
- Women in whom vaginal delivery is otherwise contraindicated (e.g., those with placenta previa)

Qualifying Statements

Qualifying Statements

- These guidelines should not be construed as dictating an exclusive course of treatment or procedure. Variations in practice may be warranted based on the needs of the individual patient, resources, and limitations unique to the institution or type of practice.
- There are currently no randomized trials comparing maternal or neonatal outcomes between women undertaking a trial of labor after cesarean delivery (TOLAC) and those undergoing repeat cesarean delivery.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Audit Criteria/Indicators

Foreign Language Translations

Patient Resources

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

Staying Healthy

IOM Domain

Effectiveness

Patient-centeredness

Safety

Identifying Information and Availability

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Adaptation

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

Date Released

1999 Jun (revised 2010 Aug)

Guideline Developer(s)

American College of Obstetricians and Gynecologists - Medical Specialty Society

Source(s) of Funding

American College of Obstetricians and Gynecologists (ACOG)

Guideline Committee

American College of Obstetricians and Gynecologists (ACOG) Committee on Practice Bulletins - Obstetrics

Composition of Group That Authored the Guideline

American College of Obstetricians and Gynecologists (ACOG) committees are created or abolished and their overall function defined by the Executive Board. Appointments are made for one year, with the understanding that such appointment may be continued for a total of three years. The majority of committee members are Fellows, but Junior Fellows also are eligible for appointment. Some committees may have representatives from other organizations when this is particularly appropriate to committee activities. The president elect appoints committee members annually.

Financial Disclosures/Conflicts of Interest

Not stated

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Guideline Availability

Electronic copies: Not available at this time.

Print copies: Available for purchase from the American College of Obstetricians and Gynecologists (ACOG) Distribution Center, PO Box 933104, Atlanta, GA 31193-3104; telephone, 800-762-2264, ext. 192; e-mail: sales@acog.org. The ACOG Bookstore is available online at the ACOG Web site.

Availability of Companion Documents

Proposed performance measures are included in the original guideline document.

Patient Resources

The following is available:

- Vaginal birth after cesarean delivery. Atlanta (GA): American College of Obstetricians and Gynecologists (ACOG); 2009. Available from the ACOG Web site. Copies are also available in Spanish.

Print copies: Available for purchase from the American College of Obstetricians and Gynecologists (ACOG) Distribution Center, PO Box 933104, Atlanta, GA 31193-3104; telephone, 800-762-2264, ext. 192; e-mail: sales@acog.org. The ACOG Bookstore is available online at the ACOG Web site.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC Status

This NGC summary was completed by ECRI on January 14, 2004. This NGC summary was updated by ECRI on February 9, 2005. The information was reaffirmed by the guideline developer in 2009 and updated by ECRI Institute on February 9, 2010. This NGC summary was updated by ECRI Institute on September 17, 2010.

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