Complete Summary

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); 2004 Jul. 10 p. (ACOG practice bulletin; no. 54). [105 references]

GUIDELINE STATUS

This is the current release of the guideline.

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COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Vaginal birth after previous cesarean delivery

GUIDELINE CATEGORY

Counseling
Management

Prevention
Risk Assessment

CLINICAL SPECIALTY

Obstetrics and Gynecology

INTENDED USERS

Physicians

GUIDELINE OBJECTIVE(S)

- To aid practitioners in making decisions about appropriate obstetric and gynecologic care
- To review the current risks and benefits of vaginal birth after cesarean delivery in various situations and provide practical management guidelines

TARGET POPULATION

Pregnant women attempting vaginal birth after 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)
3. Labor management including external cephalic version for breech presentation, adequate pain relief (epidural analgesia or other types of pain relief), continuous electronic monitoring, and presence of personnel familiar with the potential complications of VBAC
4. Close patient monitoring if oxytocin is used for augmentation of contractions
5. Prompt and complete assessment of the previous scar and the entire genital tract in cases of excessive vaginal bleeding or signs of hypovolemia

MAJOR OUTCOMES CONSIDERED

- Success rate for trials of labor after previous cesarean delivery
- The risks and benefits associated with vaginal birth after cesarean delivery
- Cost-effectiveness of a trial of labor after a previous cesarean delivery

METHODOLOGY

METHODS USED TO COLLECT/SELECT 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 March 2004. 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 symposiums 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.

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

The guideline developers reviewed published cost analyses: Evidence suggests that cost savings are not achieved unless at least 70% of women who attempt a trial of labor are successful.

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 (ACOG) 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 vaginal birth after cesarean delivery (VBAC) and should be counseled about VBAC and offered a trial of labor.
- Epidural anesthesia may be used for VBAC.

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

- Women with a vertical incision within the lower uterine segment that does not extend into the fundus are candidates for VBAC.
- The use of prostaglandins for cervical ripening or induction of labor in most women with a previous cesarean delivery should be discouraged.

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

- Because uterine rupture may be catastrophic, VBAC should be attempted in institutions equipped to respond to emergencies with physicians immediately available to provide emergency care.
- After thorough counseling that weighs the individual benefits and risks of VBAC, the ultimate decision to attempt this procedure or undergo a repeat cesarean delivery should be made by the patient and her physician. This discussion should be documented in the medical record.
- Vaginal birth after a previous cesarean delivery is contraindicated in women with a previous classical uterine incision or extensive transfundal uterine surgery.

Definitions

Grades 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

Levels 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.

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

The vaginal birth after cesarean delivery is associated with shorter maternal hospitalizations, less blood loss and fewer transfusions, fewer infections, and fewer thromboembolic events than cesarean delivery.

POTENTIAL HARMS

- A failed trial of labor may be associated with major maternal complications, such as uterine rupture, hysterectomy, and operative injury, as well as increased maternal infection and the need for transfusion.
- Neonatal morbidity also is increased with failed trial of labor, as evidenced by the increased incidence of arterial umbilical cord blood gas pH levels below 7, 5-minute Apgar scores below 7, and infection.
- Although the incidence of perinatal death is low (generally less than 1%), it is more likely to occur during a trial of labor than elective repeat cesarean delivery.

CONTRAINDICATIONS

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Contraindications for Vaginal Birth after Cesarean Delivery

- Previous classical or T-shaped incision or extensive transfundal uterine surgery
- Previous uterine rupture

- Medical or obstetric complication that precludes vaginal delivery
- Inability to perform emergency cesarean delivery because of unavailable surgeon, anesthesia, sufficient staff, or facility
- Two prior uterine scars and no vaginal deliveries

QUALIFYING STATEMENTS

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- 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.
- Despite thousands of citations in the world's literature, there are currently no randomized trials comparing maternal or neonatal outcomes for both repeat cesarean delivery and vaginal birth after previous cesarean delivery (VBAC).

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

Staying Healthy

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

1999 Jun (revised 2004 Jul)

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

Not stated

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 4500, Kearneysville, WV 25430-4500; 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

None available

PATIENT RESOURCES

None available

NGC STATUS

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