Guideline Title
Antibiotic prophylaxis for gynecologic procedures.

Bibliographic Source(s)

Guideline Status
This is the current release of the guideline.


Scope

Disease/Condition(s)
Surgical site infection and other infectious complications of gynecologic procedures, including:
- Pelvic inflammatory disease (PID)
- Endometritis
- Bacterial vaginosis
- Bacteremia
- Bacterial endocarditis
- Bacteriuria and urinary tract infection

Guideline Category
Prevention

Clinical Specialty
Cardiology
Infecstious Diseases
Obstetrics and Gynecology
Surgery

Intended Users
Physicians

Guideline Objective(s)
- To aid practitioners in making decisions about appropriate obstetric and gynecologic care
- To review the evidence for surgical site infection prevention and appropriate antibiotic prophylaxis for gynecologic procedures

Target Population
Women undergoing gynecologic surgery and other gynecologic procedures

Interventions and Practices Considered

Prevention
1. Antibiotic prophylaxis for the following gynecologic procedures:
   - Vaginal/abdominal hysterectomy
   - Hysterosalpingography (HSG) for patients with dilated tubes or a history of pelvic inflammatory disease (PID) or tubal damage
   - Chromotubation for patients with a history of PID or tubal damage
   - Hysteroscopy for patients with a history of PID or tubal damage
   - Suction curettage abortion (missed or elective)
   - Preoperative bowel preparation
2. Antibiotic prophylaxis for patients with penicillin allergy (not immunoglobulin E mediated)
3. Procedures for which antibiotic prophylaxis is not recommended:
Pelvic inflammatory disease (PID)

To aid practitioners in making decisions about appropriate obstetric and gynecologic care

Prevention of surgical site infection of gynecologic procedures

Rates of infection in gynecologic procedures

Pseudomembranous colitis

Induction of bacterial resistance

Antibiotic prophylaxis is not recommended in patients undergoing exploratory laparotomy.

Antibiotic prophylaxis is not recommended in patients undergoing diagnostic laparoscopy.

Pelvic inflammatory disease occurs uncommonly with or without the use of antibiotic prophylaxis and so

Nausea, vomiting, and/or abdominal pain

Bacterial endocarditis

Suction curettage abortion (missed or elective)

Appropriate use of antibiotic prophylaxis for gynecologic procedures

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 the American College of Obstetricians and Gynecologists’ own internal resources and documents were used to conduct a literature search to locate relevant articles published between January 1985 and May 2008. The search was restricted to articles published in the English language. Priority was given to 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 the American College of Obstetricians and Gynecologists 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
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 subspecialists. 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 and conclusions are based on good and consistent scientific evidence (Level A):
- Patients undergoing hysterectomy should receive single-dose antimicrobial prophylaxis preoperatively.
- Pelvic inflammatory disease occurs uncommonly with or without the use of antibiotic prophylaxis and so prophylaxis is not indicated at the time of intrauterine device (IUD) insertion.
- Antibiotic prophylaxis is indicated for selective suction curettage abortion.
- Antibiotic prophylaxis is not recommended in patients undergoing diagnostic laparoscopy.

The following recommendations and conclusions are based on limited or inconsistent scientific evidence (Level B):
- In patients with no history of pelvic infection, hysterosalpingography (HSG) can be performed without prophylactic antibiotics. If HSG demonstrates dilated fallopian tubes, antibiotic prophylaxis should be given to reduce the incidence of post-HSG pelvic inflammatory disease (PID).
- Routine antibiotic prophylaxis is not recommended for the general patient population undergoing hysteroscopic surgery.
- Cephalosporin prophylaxis is acceptable in those patients with a history of penicillin allergy not felt to be immunoglobulin E mediated (immediate hypersensitivity).
- Patients found to have preoperative bacterial vaginosis should be treated before hysterectomy.

The following recommendations and conclusions are based primarily on consensus and expert opinion (Level C):
- Antibiotic prophylaxis is not recommended in patients undergoing exploratory laparotomy.
- For transcervical procedures such as HSG, chromotubation, and hysteroscopy, prophylaxis may be considered in those patients with a history of PID or tubal damage noted at the time of the procedure.
- Patients with a history of an immediate hypersensitivity reaction to penicillin should not receive cephalosporin antibiotics.
- Pretest screening for bacteriuria or urinary tract infection by urine culture or urinalysis, or both, is recommended in women undergoing urodynamic testing. Those with positive test results should be given antibiotic treatment.

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 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.

Levels of Recommendation
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.
Pelvic inflammatory disease (PID) - Vaginal/abdominal hysterectomy

Bacteremia

Pelvic inflammatory disease occurs uncommonly with or without the use of antibiotic prophylaxis and so

Rates of infection in gynecologic procedures

Bacterial vaginosis

Endometritis

In patients with no history of pelvic infection, hysterosalpingography (HSG) can be performed without prophylactic

Nausea, vomiting, and/or abdominal pain

Laparoscopy and laparotomy

Patients undergoing hysterectomy should receive single

Chromotubation for patients with a history of PID or tubal damage

Pseudomembranous colitis

Hysteroscopy for patients with a history of PID or tubal damage.

Ngc Disclaimer

Availability of Companion Documents

Guideline Availability

Guideline Status

Financial Disclosures/Conflicts of Interest

Composition of Group That Authored the Guideline

Source(s) of Funding

Identifying Information and Availability

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

- Appropriate use of antibiotic prophylaxis for gynecologic procedures
- Prevention of surgical site infection of gynecologic procedures

Potential Harms

Adverse Effects of Antibiotics

- Allergic reactions (from minor skin rashes to anaphylaxis)
- Pseudomembranous colitis
- Diarrhea
- Induction of bacterial resistance
- Nausea, vomiting, and/or abdominal pain

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.

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
Staying Healthy

IOM Domain
Effectiveness

Identifying Information and Availability

Bibliographic Source(s)


Adaptation

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

Date Released
2001 Jan (revised 2009 May)

Guideline Developer(s)

American College of Obstetricians and Gynecologists - Medical Specialty Society

Source(s) of Funding
Pelvic inflammatory disease (PID)

Patients undergoing hysterectomy should receive single antibiotic prophylaxis.

Antibiotic prophylaxis is not recommended in patients undergoing exploratory laparotomy.

In patients with no history of pelvic infection, hysterosalpingography (HSG) can be performed without prophylactic antibiotic prophylaxis.

Prevention of surgical site infection of gynecologic procedures

Bacteriuria and urinary tract infection

Suction curettage abortion (missed or elective)

For transcervical procedures such as HSG, chromotubation, and hysteroscopy, prophylaxis may be considered in appropriate cases.

Appropriate use of antibiotic prophylaxis for gynecologic procedures

Pelvic inflammatory disease occurs uncommonly with or without the use of antibiotic prophylaxis and so routine prophylaxis is not needed in asymptomatic patients.

Pseudomembranous colitis

Bacteremia

Patients found to have preoperative bacterial vaginosis should be treated before hysterectomy.

Routine antibiotic prophylaxis is not recommended for the general patient population undergoing hysteroscopic procedures.

Readers with questions regarding guideline content are directed to contact the guideline developer.
Pelvic inflammatory disease (PID) - For transcervical procedures such as HSG, chromotubation, and hysteroscopy, prophylaxis may be considered in those patients with a history of PID or tubal damage noted at the time of the procedure. Bacteriuria and urinary tract infection

Appropriate use of antibiotic prophylaxis for gynecologic procedures

Vaginal/abdominal hysterectomy

Patients found to have preoperative bacterial vaginosis should be treated before hysterectomy.

In patients with no history of pelvic infection, hysterosalpingography (HSG) can be performed without prophylactic antibiotics. Antibiotic prophylaxis is indicated for elective suction curettage abortion.

Allergic reactions (from minor skin rashes to anaphylaxis)

Bacteremia

Preoperative bowel preparation

Pelvic inflammatory disease occurs uncommonly with or without the use of antibiotic prophylaxis and so such patients may be considered for prophylaxis.