

Antibiotic Prophylaxis in Obstetric Procedures

This Clinical Practice Guideline has been prepared by the Infectious Diseases Committee and approved by the Executive and Council of the Society of Obstetricians and Gynaecologists of Canada.

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Disclosure statements have been received from all members of the committee.

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2009 were incorporated in the guideline. Current guidelines published by the American College of Obstetrics and Gynecology were also incorporated. Grey (unpublished) literature was identified through searching the websites of health technology assessment and health technology assessment-related agencies, clinical practice guideline collections, clinical trial registries, and national and international medical specialty societies.

Values: The evidence obtained was reviewed and evaluated by the Infectious Diseases Committee of the Society of Obstetricians and Gynaecologists of Canada under the leadership of the principal authors, and recommendations were made according to guidelines developed by the Canadian Task Force on Preventive Health Care (Table 1).

Benefits, Harms, and Costs: Implementation of this guideline should reduce the cost and harm resulting from the administration of antibiotics when they are not required and the harm resulting from failure to administer antibiotics when they would be beneficial.

Summary Statements

1. Available evidence does not support the use of prophylactic antibiotics to reduce infectious morbidity following operative vaginal delivery. (II-1)
2. There is insufficient evidence to argue for or against the use of prophylactic antibiotics to reduce infectious morbidity for manual removal of the placenta. (III)
3. There is insufficient evidence to argue for or against the use of prophylactic antibiotics at the time of postpartum dilatation and curettage for retained products of conception. (III)
4. Available evidence does not support the use of prophylactic antibiotics to reduce infectious morbidity following elective or emergency cerclage. (II-3)

Recommendations

1. All women undergoing elective or emergency Caesarean section should receive antibiotic prophylaxis. (I-A)
2. The choice of antibiotic for Caesarean section should be a single dose of a first-generation cephalosporin. If the patient has a penicillin allergy, clindamycin or erythromycin can be used. (I-A)
3. The timing of prophylactic antibiotics for Caesarean section should be 15 to 60 minutes prior to skin incision. No additional doses are recommended. (I-A)
4. If an open abdominal procedure is lengthy (> 3 hours) or estimated blood loss is greater than 1500 mL, an additional dose of the prophylactic antibiotic may be given 3 to 4 hours after the initial dose. (III-L)
5. Prophylactic antibiotics may be considered for the reduction of infectious morbidity associated with repair of third and fourth degree perineal injury. (I-B)

Abstract

Objective: To review the evidence and provide recommendations on antibiotic prophylaxis for obstetrical procedures.

Outcomes: Outcomes evaluated include need and effectiveness of antibiotics to prevent infections in obstetrical procedures.

Evidence: Published literature was retrieved through searches of Medline and The Cochrane Library on the topic of antibiotic prophylaxis in obstetrical procedures. Results were restricted to systematic reviews, randomized controlled trials/controlled clinical trials, and observational studies. Searches were updated on a regular basis and articles published from January 1978 to June

Key Words: Antibiotic prophylaxis, surgical prophylaxis, obstetrical procedures, surgical site infection, SSI, endometritis, endocarditis

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Table 1. Key to evidence statements and grading of recommendations, using the ranking of the Canadian Task Force on Preventive Health Care

Quality of evidence assessment*	Classification of recommendations†
I: Evidence obtained from at least one properly randomized controlled trial	A. There is good evidence to recommend the clinical preventive action
II-1: Evidence from well-designed controlled trials without randomization	B. There is fair evidence to recommend the clinical preventive action
II-2: Evidence from well-designed cohort (prospective or retrospective) or case-control studies, preferably from more than one centre or research group	C. The existing evidence is conflicting and does not allow to make a recommendation for or against use of the clinical preventive action; however, other factors may influence decision-making
II-3: Evidence obtained from comparisons between times or places with or without the intervention. Dramatic results in uncontrolled experiments (such as the results of treatment with penicillin in the 1940s) could also be included in this category	D. There is fair evidence to recommend against the clinical preventive action
III: Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees	E. There is good evidence to recommend against the clinical preventive action
	L. There is insufficient evidence (in quantity or quality) to make a recommendation; however, other factors may influence decision-making

*The quality of evidence reported in these guidelines has been adapted from The Evaluation of Evidence criteria described in the Canadian Task Force on Preventive Health Care.⁴⁰

†Recommendations included in these guidelines have been adapted from the Classification of Recommendations criteria described in the The Canadian Task Force on Preventive Health Care.⁴⁰

6. In patients with morbid obesity (BMI > 35), doubling the antibiotic dose may be considered. (III-B)

7. Antibiotics should not be administered solely to prevent endocarditis for patients who undergo an obstetrical procedure of any kind. (III-E)

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