



Prophylactic antibiotics effective for women undergoing caesarean section

Clinical question

How effective are prophylactic antibiotics for women undergoing caesarean section?

Bottom line

Compared with no treatment, prophylactic antibiotics reduced the incidence of endometritis following both elective and non-elective caesarean section by two-thirds to three-quarters and the incidence of wound infection by up to three-quarters. Postpartum febrile morbidity and the incidence of urinary tract infections were also decreased. Fewer serious complications were identified. The administration of prophylactic antibiotics before or after clamping of the cord seemed equally effective for women undergoing caesarean section. The antimicrobial agents most often used in the trials included ampicillin, a first generation cephalosporin (usually cefazolin), a second generation cephalosporin (cefotaxime, cefotetan, cefamandole or cefuroxime), metronidazole, penicillins with an extended spectrum of activity (eg, ticarcillin, mezlocillin or piperacillin), a beta-lactam/beta-lactamase inhibitor combination, and an aminoglycoside-containing combination.

Caveat

Prophylactic antibiotics given to all women undergoing elective or non-elective caesarean section is clearly beneficial for women but there is uncertainty about the consequences for the baby. Studies did not assess potential adverse effects on the baby, and the rates of oral candidiasis were not reported. It was also unclear whether the routine use of antibiotics would contribute to increasing drug resistant strains of bacteria.

Context

Women undergoing caesarean section have a 5-fold to 20-fold greater chance of an infection compared with women who give birth vaginally. These infections can be in the organs within the pelvis, around the surgical incision and sometimes in the urinary tract. The infections can be serious, and very occasionally can lead to the mother's death. The potential benefits of reducing infection for the mother need to be balanced against adverse effects, such as nausea, vomiting, skin rash and rarely allergic reactions in the mother, and the risk of oral candidiasis and any effect of antibiotics on the "friendly" gut bacteria in the baby.

Cochrane Systematic Review

Smaill FM and Gyte GML. Antibiotic prophylaxis versus no prophylaxis for preventing infection after caesarean section. Cochrane Reviews 2010, Issue 1. Article No. CD007482. DOI: 10.1002/14651858.CD007482.pub2.
This review contains 86 studies involving over 13,000 participants.

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