West Middlesex University Hospital

Date of Search: 05 Sep 2017
Sources Searched: Medline, Embase, PubMed.

Vaginal Cleansing and Emergency Caesarean Section

See full search strategy

1. Vaginal cleansing prior to caesarean section and postoperative infectious morbidity

Author(s): Asad S.; Batool Mazhar S.; Khalid Butt N.; Habiba U.

Source: BJOG: An International Journal of Obstetrics and Gynaecology; Mar 2017; vol. 124 ; p. 45

Publication Date: Mar 2017

Publication Type(s): Conference Abstract

Available in full text at BJOG: An International Journal of Obstetrics and Gynaecology - from John Wiley and Sons

Abstract: Introduction Caesarean section, a common obstetric surgical procedures has ten-fold increased risk of infective complications compared with vaginal deliveries. A strategy employed to reduce postoperative infections is cleansing of all body surfaces in contact during this procedure including vagina. The objective was to compare the frequency of postoperative infectious morbidity in emergency caesarean section with and without preoperative vaginal cleansing with povidone iodine. Methods Randomised controlled trial at MCHC PIMS, Islamabad from 1 February to 31 July 2016 among 434 women undergoing emergency caesarean with labor duration >6 h irrespective of membrane rupture. Women with diabetes mellitus, anaemia, obstructed labour or any febrile condition were excluded. At the time of surgery, equal numbers were randomly assigned to Group A receiving vaginal and abdominal scrub, and group B only abdominal scrub. Follow-up for infectious morbidity, namely fever, wound infection and endometritis, was up to 3 weeks. Results The mean age was 28.4 years in group A and 27.5 years in group B, mean gestational age was 38.5 weeks in group A and 37.9 weeks in group B. Fever was seen in 4.1% of women in group A and 7.4% in group B (P = 0.149). Endometritis was detected in 1.4% of women in group A and 8.8% in group B (P = 0.000). Wound Infection was noted in 1.4% of women in group A and 3.7% in group B (P = 0.126). Conclusion Additional povidone iodine vaginal cleansing before emergency caesarean section significantly decreased postpartum endometritis. Also noted was a trend toward reduced fever and wound infection.

Database: EMBASE

2. Is a vaginal betadine wash after caesarean section an effective intervention in reducing the incidence of postoperative endometritis and sepsis?

Author(s): Vanes N.K.; Castleman J.; Ganapathy R.

Source: BJOG: An International Journal of Obstetrics and Gynaecology; Apr 2015; vol. 122 ; p. 176

Publication Date: Apr 2015

Publication Type(s): Conference Abstract

Abstract: Introduction The objective of this study was to determine whether vaginal betadine washes immediately following caesarean section led to reduction in postoperative infection rates. Method In an attempt to reduce the incidence of postoperative infections our department adopted a universal policy of vaginal cleansing with betadine after elective and emergency caesareans. This study was an audit of the change of this clinical practice. The primary outcomes measured were endometritis, sepsis, fever, hospital readmission or wound complication. Results The period of study was over a 4 month period when 172 women underwent elective and emergency caesareans. In the study period there were 72 elective caesareans and 100 emergency caesarean procedures. In the elective procedures there were 4 cases where antibiotics were given empirically for suspected superficial wound infection (wound cultures were negative in all) and there was one case of proven urinary tract infection. In the emergency cases there were 9 cases of culture proven wound infections and 5 cases of urinary tract infections. 2 cases of antenatally diagnosed chorioamnionitis that received antibiotics were not included in the analysis. Analysis of the cases of infection in the elective caesarean section showed no correlation between reasons for surgery, duration of surgery, suture material and maternal demographic characteristics. Analysis of the emergency caesareans with wound infections showed that there were 7 cases of superficial wound infection and no cases of sepsis or endometritis. None of the cases had post op pyrexia, wound haematomas, readmission to hospital. Only 3 cases had a clinically significant rise in the white blood cell count - 2 with superficial wound infection and one with a proven UTI with klebsiella org. In all these cases the C-reactive protein (CRP) showed no correlation with clinical signs. 5 of these cases had received intrapartum antibiotics for GBS prophylaxis. Blood culture was negative in both the cases with chorioamnionitis. Conclusion In emergency and elective caesareans betadine vaginal washing does not have any effect on superficial wound infections. There is a significant reduction in postoperative endometritis and possibly urinary tract infections in elective caesareans. Although it appears pragmatic the practice will not change the incidence of superficial wound infections or urinary tract infections. There is a definite benefit in this practice as none of the women had pelvic infections necessitating longer hospital stay and this has a definite cost benefit in healthcare.

Database: EMBASE

3. Preventing post-caesarean infection: A systematic review to establish recommended practice

Author(s): Martin E.; Graves N.; Beckmann M.

Source: BJOG: An International Journal of Obstetrics and Gynaecology; Apr 2015; vol. 122 ; p. 287-288

Publication Date: Apr 2015

Publication Type(s): Conference Abstract

Abstract: Introduction There is currently no guideline on the most effective strategies to prevent surgical site infection (SSI) following caesarean section. There is little agreement across existing clinical guidelines for strategies such as skin asepsis, surgical technique and even administration of antibiotic prophylaxis. In addition, systematic reviews and meta-analysis have produced inconsistent results that sometimes conflict with clinical guidelines. In 2012, 14% of Queensland mothers reported that their caesarean wound became infected, and nationally the infection rate is estimated to be 9%. For the mother, an infection results in pain and delay in returning to normal function and may compromise bonding with baby and establishment of breastfeeding, during an already challenging time. Consequences of SSI for the health service can be additional use of staff time, pharmaceutical and health supplies, and increased length of stay or readmission to hospital, potentially forgoing a hospital bed for another patient. This study aimed to identify the most effective strategies to prevent postcaesarean SSI in order to establish recommended practice for Australian hospitals. Methods A systematic review of literature reviews and metaanalyses published from 2004 to 2014 was conducted. Seven databases were searched using the terms 'caesarean' AND 'infection' or 'endometritis'. Existing systematic reviews and metaanalyses were examined and then updated by extending the search periods. Studies were assessed for quality and effectiveness data was extracted and compared. Results After screening the titles and abstracts, 49 studies were included in the systematic review. These systematic reviews and meta-analyses examined the effectiveness of 45 individual infection prevention strategies for reducing post-caesarean SSI. Important strategies appropriate for both emergency and elective caesarean section included administering antibiotic prophylaxis pre-incision, vaginal cleansing, no pubic hair removal from 4 weeks before estimated date of delivery, and adopting a patient safety checklist. Conclusion The results of this systematic review will be compared to strategies Australian Obstetricians and Diplomates are currently employing, enabling gaps in clinical practice to be identified. The cost-effectiveness of moving from current practice to a gold standard infection prevention approach will also be evaluated. Post-caesarean infection is an avoidable complication that is under-reported through hospital surveillance systems. Identifying key infection prevention strategies and updating Australia's clinical guidelines will contribute to improving practice and reducing infections following caesarean section.

Database: EMBASE

4. Vaginal cleansing following caesarean section: Are postoperative complications reduced?

Author(s): Birchenall K.; Vanes N.; Engineer N.

Source: BJOG: An International Journal of Obstetrics and Gynaecology; Apr 2014; vol. 121 ; p. 86

Publication Date: Apr 2014

Publication Type(s): Conference Abstract

Available in full text at BJOG: An International Journal of Obstetrics and Gynaecology - from John Wiley and Sons

Abstract: Introduction Despite the use of perioperative prophylactic antibiotics, caesarean section (CS) continues to be associated with an increased risk of maternal morbidity when compared with normal vaginal delivery, including increased frequency of endometritis, maternal fever, sepsis and wound infection. Consequently, adjuvant methods for reducing infection have been investigated, including pre-operative vaginal preparation with antiseptic solution. A recent Cochrane review determined vaginal preparation immediately before CS was significantly associated with a reduced incidence of postoperative endometritis, from 7.2% to 3.6%, with a particularly pronounced improvement for women with existing rupture of membranes. At University Hospital Coventry (UHC), a large teaching hospital in the UK, postoperative vaginal cleansing with betadine immediately following skin closure was introduced to the CS protocol in April 2013. Unlike previous studies, we opted for postoperative rather than preoperative cleansing as this would not delay delivery, and would be easily incorporated into the already routine postoperative vaginal swabbing. The aim of this study was to determine if vaginal cleansing following CS reduced postoperative complications. Methods Patients delivered by CS at UHC were identified from theatre records. The first 30 elective and 30 emergency CS performed in May 2012 (group A, n = 60) and May 2013 (group B, n = 60) were selected. Data were then collated from hospital notes, including operative timings, presence of pre-existing rupture of membranes, and any postoperative complications. Results Women from both groups were of similar age, parity, comorbidity status and BMI. All CS performed used a lower uterine segment incision, and there was no significant difference in mean operative duration between groups. For the elective cases, there was no significant difference in incidence of postoperative infection between 2012 and 2013. However, for the emergency cases there was a significant decrease in the number of patients with postoperative endometritis, fever or wound infection (5 versus 2, P = 0.001; 95% CI: 1.7-16.2), and a significant decrease in readmission for wound infection (4 versus 0, P = 0.02). Conclusion Although a small study, these findings suggest the previously reported benefits of vaginal cleansing prior to CS remain when performed after delivery. This is important as preoperative cleansing may delay delivery of the baby. The particular improvement observed for emergency cases may be related to an increased prevalence of pre-existing ruptured membranes in those delivered by emergency CS. In summary, our findings indicate that postoperative vaginal cleansing for emergency CS may be as beneficial as preoperative cleansing, and therefore may offer a safer and more practical alternative timing.

Database: EMBASE

5. Vaginal Cleansing Before Cesarean Delivery: A Systematic Review and Meta-analysis.

Author(s): Caissutti, Claudia; Saccone, Gabriele; Zullo, Fabrizio; Quist-Nelson, Johanna; Felder, Laura; Ciardulli, Andrea; Berghella, Vincenzo

Source: Obstetrics and gynecology; Sep 2017; vol. 130 (no. 3); p. 527-538

Publication Date: Sep 2017

Publication Type(s): Journal Article

PubMedID: 28796683

Abstract:OBJECTIVETo assess the efficacy of vaginal cleansing before cesarean delivery in reducing postoperative endometritis.DATA SOURCESMEDLINE, Ovid, EMBASE, Scopus, Clinicaltrials.gov, and Cochrane Library were searched from their inception to January 2017.METHODS OF STUDY SELECTIONSelection criteria included all randomized controlled trials comparing vaginal cleansing (ie, intervention group) with a control group (ie, either placebo or no intervention) in women undergoing cesarean delivery. Any method of vaginal cleansing with any type of antiseptic solution was included. The primary outcome was the incidence of endometritis. Meta-analysis was performed using the random-effects model of DerSimonian and Laird to produce summary treatment effects in terms of relative risk (RR) with 95% CI.TABULATION, INTEGRATION, AND RESULTSSixteen trials (4,837 women) on vaginal cleansing immediately before cesarean delivery were identified as relevant and included in the review. In most of the included studies, 10% povidone-iodine was used as an intervention. The most common way to perform the vaginal cleansing was the use of a sponge stick for approximately 30 seconds. Women who received vaginal cleansing before cesarean delivery had a significantly lower incidence of endometritis (4.5% compared with 8.8%; RR 0.52, 95% CI 0.37-0.72; 15 studies, 4,726 participants) and of postoperative fever (9.4% compared with 14.9%; RR 0.65, 95% CI 0.50-0.86; 11 studies, 4,098 participants) compared with the control group. In the planned subgroup analyses, the reduction in the incidence of endometritis with vaginal cleansing was limited to women in labor before cesarean delivery (8.1% compared with 13.8%; RR 0.52, 95% CI 0.28-0.97; four studies, 440 participants) or those with ruptured membranes (4.3% compared with 20.1%; RR 0.23, 95% CI 0.10-0.52; three studies, 272 participants).CONCLUSION Vaginal cleansing immediately before cesarean delivery in women in labor and in women with ruptured membranes reduces the risk of postoperative endometritis. Because it is generally inexpensive and a simple intervention, we recommend preoperative vaginal preparation before cesarean delivery in these women with sponge stick preparation of povidone-iodine 10% for at least 30 seconds. More data are needed to assess whether this intervention may be also useful for cesarean deliveries performed in women not in labor and for those without ruptured membranes.SYSTEMATIC REVIEW REGISTRATIONPROSPERO International prospective register of systematic reviews, https://www.crd.york.ac.uk/PROSPERO/, CRD42017054843.

Database: Medline

6. Reduction of cesarean delivery surgical site infections using an evidence-based care bundle

Author(s): Villers M.S.; Thomas C.H.; Grotegut C.A.; Heine R.P.; Swamy G.K.

Source: American Journal of Obstetrics and Gynecology; Jan 2017; vol. 216 (no. 1)

Publication Date: Jan 2017

Publication Type(s): Conference Abstract

Abstract:OBJECTIVE: Cesarean delivery surgical site infections (SSI) are associated with significant patient morbidity, hospital readmissions, and increased costs to healthcare systems. We developed an evidencebased bundle of initiatives to reduce cesarean delivery SSIs. STUDY DESIGN: Beginning in January 2016, we implemented a bundle of initiatives aimed at the reduction of SSIs in women undergoing cesarean delivery. The bundle components consisted of: preoperative skin preparation with 2% chlorhexidine cloths and preoperative vaginal cleansing with chlorhexidine gluconate in all patients. Negative pressure wound therapy was utilized in women with a BMI >= 40 or with a high risk of post-operative infection. We continually assessed protocol compliance and outcomes. We compared the SSI rate from January-June 2016 to the rate from January-June 2014. Bivariable analysis performed using chi-square and Mann-Whitney U tests. Logistic regression models were fitted to adjust for significant covariates. RESULTS: The pre-bundle cohort includes 311 women who underwent cesarean delivery and the post-bundle cohort includes 514 women. Compliance with all components of the bundle was 78%. Compared to the post-bundle cohort, the pre-bundle cohort has a higher rate of gestational diabetes (11% vs 6%, p = 0.02) and lower closure rate of subcutaneous tissue (80% vs 93%, p<0.001). The SSI rate decreased from 9% to 2% after implementation of the bundle. The overall wound complication rate, which includes infection, seroma, and hematoma, decreased from 10% to 4% after bundle implementation. After adjusting for GDM and subcutaneous closure, the odds of SSI was significantly lower after implementation of the bundle (adjusted OR 0.3, 95% CI 0.1-0.5). (Table) CONCLUSION: Development and implementation of an evidencebased care bundle optimized for our patient population resulted in a significant reduction of cesarean delivery surgical site infections. (Table Presented).

Database: EMBASE

7. Practices to Reduce Surgical Site Infections Among Women Undergoing Cesarean Section: A Review.

Author(s): McKibben, Rebeccah A; Pitts, Samantha I; Suarez-Cuervo, Catalina; Perl, Trish M; Bass, Eric B

Source: Infection control and hospital epidemiology; Aug 2015; vol. 36 (no. 8); p. 915-921

Publication Date: Aug 2015

Publication Type(s): Journal Article Review

PubMedID: 25990701

Abstract:OBJECTIVESurgical site infections (SSIs) are a leading cause of morbidity and mortality among women undergoing cesarean section (C-section), a common procedure in North America. While risk factors for SSI are often modifiable, wide variation in clinical practice exists. With this review, we provide a comprehensive overview of the results and quality of systematic reviews and meta-analyses on interventions to reduce surgical site infections among women undergoing C-section.METHODSWe searched PubMed and the Cochrane Database of Systematic Reviews for systematic reviews and meta-analyses published between January 2000 and May 2014 on interventions to reduce the occurrence of SSIs (incisional infections and endometritis), among women undergoing C-section. We extracted data on the interventions, outcomes, and strength of evidence as determined by the original article authors, and assessed the quality of each article based on a modified Assessment of Multiple Systematic Reviews tool.RESULTSA total of 30 review articles met inclusion criteria and were reviewed. Among these articles, 77 distinct interventions were evaluated: 29% were supported with strong evidence as assessed by the original article authors, and 83% of the reviews articles were classified as good quality based on our assessment. Ten interventions were classified as being effective in reducing SSI with strong evidence in a good-quality article, including preoperative vaginal cleansing, the use of perioperative antibiotic prophylaxis, and several surgical techniques.CONCLUSIONEfforts to reduce SSI rates among women undergoing C-section should include interventions such as preoperative vaginal cleansing and the use of perioperative antibiotics because compelling evidence exists to support their effectiveness.

Database: Medline

8. Vaginal preparation with antiseptic solution before cesarean section for preventing postoperative infections.

Author(s): Haas, David M; Morgan, Sarah; Contreras, Karenrose

Source: The Cochrane database of systematic reviews; Dec 2014 (no. 12); p. CD007892

Publication Date: Dec 2014

Publication Type(s): Research Support, Non-u.s. Gov't Meta-analysis Journal Article Review

PubMedID: 25528419

Abstract:BACKGROUNDCesarean delivery is one of the most common surgical procedures performed by obstetricians. Infectious morbidity after cesarean delivery can have a tremendous impact on the postpartum woman's return to normal function and her ability to care for her baby. Despite the widespread use of prophylactic antibiotics, postoperative infectious morbidity still complicates cesarean deliveries.OBJECTIVESTo determine if cleansing the vagina with an antiseptic solution before a cesarean delivery decreases the risk of maternal infectious morbidities, including endometritis and wound complications.SEARCH METHODSWe searched the Cochrane Pregnancy and Childbirth Group's Trials Register (10 December 2014).SELECTION CRITERIAWe included randomized and quasi-randomized trials assessing the impact of vaginal cleansing immediately before cesarean delivery with any type of antiseptic solution versus a placebo solution/standard of care on post-cesarean infectious morbidity.DATA COLLECTION AND ANALYSISWe independently assessed eligibility and quality of the studies.MAIN RESULTSSeven trials randomizing 2816 women (2635 analyzed) evaluated the effects of vaginal cleansing (all with povidone-iodine) on post-cesarean infectious morbidity. The risk of bias was generally low, with the quality of most of the studies being high. Vaginal preparation immediately before cesarean delivery significantly reduced the incidence of post-cesarean endometritis from 8.3% in control groups to 4.3% in vaginal cleansing groups (average risk ratio (RR) 0.45, 95% confidence interval (CI) 0.25 to 0.81, seven trials, 2635 women). The risk reduction was particularly strong for women who were already in labor at the time of the cesarean delivery (7.4% in the vaginal cleansing group versus 13.0% in the control group; RR 0.56, 95% CI 0.34 to 0.95, three trials, 523 women) and for women with ruptured membranes (4.3% in the vaginal cleansing group versus 17.9% in the control group; RR 0.24, 95% CI 0.10 to 0.55, three trials, 272 women). No other outcomes realized statistically significant differences between the vaginal cleansing and control groups. No adverse effects were reported with the povidone-iodine vaginal cleansing.The quality of the evidence using GRADE was low for post-cesarean endometritis, moderate for postoperative fever, and low for wound infection.AUTHORS' CONCLUSIONSVaginal preparation with povidone-iodine solution immediately before cesarean delivery reduces the risk of postoperative endometritis. This benefit is particularly realized for women undergoing cesarean delivery, who are already in labor or who have ruptured membranes. As a simple, generally inexpensive intervention, providers should consider implementing preoperative vaginal cleansing with povidone-iodine before performing cesarean deliveries.

Database: Medline

9. Does vaginal preparation with povidone-iodine prior to caesarean delivery reduce the risk of endometritis? A randomized controlled trial.

Author(s): Yildirim, Gokhan; Güngördük, Kemal; Asicioğlu, Osman; Basaran, Toygun; Temizkan, Osman; Davas, Inci; Gulkilik, Ahmet

Source: The journal of maternal-fetal & neonatal medicine : the official journal of the European Association of Perinatal Medicine, the Federation of Asia and Oceania Perinatal Societies, the International Society of Perinatal Obstetricians; Nov 2012; vol. 25 (no. 11); p. 2316-2321

Publication Date: Nov 2012

Publication Type(s): Randomized Controlled Trial Journal Article

PubMedID: 22590998

Abstract:OBJECTIVEThe purpose of the present study was to determine whether the vaginal preparation with povidone-iodine prior to caesarean delivery decreased the incidence of postpartum endometritis.METHODSThe present study was a prospective randomized controlled trial in which subjects received a vaginal preparation with povidone-iodine solution immediately prior to caesarean delivery or received no vaginal preparation. The primary outcome measure was the rate of postpartum endometritis.RESULTSA significant decrease in post-caesarean endometritis was noted in the group that received the povidone-iodine vaginal preparation (n = 334) compared with the control group (n = 336) [6.9 vs. 11.6%; RR = 1.69; 95% CI = 1.03-2.76]. No statistically significant differences in the incidence of endometritis were noted between the experimental and control groups among women who were not in labor at the time of the caesarean delivery [9.2 vs. 8.6%; RR = 1.05; 95% CI = 0.58-1.90], and no differences were found between groups when women with ruptured membranes were excluded from the analysis [9.6 vs. 6.7%; RR = 1.39; 95% CI = 0.78-2.47].CONCLUSIONS Vaginal preparation with povidone-iodine solution immediately prior to a caesarean delivery reduces the risk of post-operative endometritis. This preemptive measure was only found to be beneficial in women whose membranes had ruptured and those who were in labor prior to caesarean surgery.

Database: Medline

10. Effect of preoperative vaginal cleansing with an antiseptic solution to reduce post caesarean infectious morbidity.

Author(s): Memon, Shahneela; Qazi, Roshan Ara; Bibi, Seema; Parveen, Naheed

Source: JPMA. The Journal of the Pakistan Medical Association; Dec 2011; vol. 61 (no. 12); p. 1179-1183

Publication Date: Dec 2011

Publication Type(s): Journal Article Evaluation Studies

PubMedID: 22355962

Abstract:OBJECTIVETo determine the effectiveness of pre operative vaginal cleansing with an antiseptic solution to reduce post caesarean infectious morbidity.METHODS An observational case control study was conducted at Department of Obstetrics and Gynaecology, Unit-III, Liaquat University Hospital, Hyderabad from February to July 2010. The 100 women in control group received the standard abdominal preparation only, while the 100 subjects in interventional group also received preoperative vaginal cleansing with 10% pyodine along with the usual abdominal scrub. All subjects received prophylactic antibiotic cover during the surgery. Maternal demographics, surgical parameters and infectious outcome were collected and data compiled on a pre-designed proforma and analysis was done using SPSS 15.RESULTSThe comparison between two groups did not show a significant difference in patient's demographics, labour and surgical variables. Post caesarean endometritis occurred in 1% of case group and 7% of controls (p value: <0.03). There was no measurable effect seen on development of fever and wound infection However, statistically significant reduction in overall composite morbidity i.e. p value: <0.02 and odds ratio 0.335 (CI=0.125-0.896) was seen in patients with vaginal cleansing group when compared with controls.CONCLUSION Preoperative vaginal cleansing with pyodine has reduced post caesarean infectious morbidities.

Database: Medline

11. Preoperative vaginal preparation with povidone-iodine on post-caesarean infectious morbidity

Author(s): Asghania M.; Mirblouk F.; Faraji R.; Shakiba M.

Source: Journal of Obstetrics and Gynaecology; Jul 2011; vol. 31 (no. 5); p. 400-403

Publication Date: Jul 2011

Publication Type(s): Article

PubMedID: 21627422

Abstract: The commonest complication associated with caesarean section is infection. The aim of this study is to investigate the effect of vaginal preparation with povidone-iodine on post-caesarean infection. In this clinical trial, 568 patients were selected for two groups: a treatment group and a control group, each with 284 patients. A vaginal scrub was performed before the routine abdominal scrub, with two 4 A x A 4 A cm sponge sticks saturated with povidone-iodine solution, rotated in the vagina for about 30 A s. In the control group, only the abdominal scrub was performed. Patients received a single dose of prophylactic antibiotics, and were reviewed for 6 weeks to look for predefined variables. Post-caesarean endometritis occurred less frequently in the treatment group than in the control group (2.5% vs 1.4%). There was no significant difference for febrile morbidity and wound infection in the two groups. The adjusted odds ratio for endometritis after vaginal preparation was 0.03 (95% CI: 0.008-0.7). Vaginal preparation with povidone-iodine may decrease the risk of post-caesarean endometritis. © 2011 Informa Uk, Ltd.

Database: EMBASE

12. Vaginal cleansing before cesarean delivery to reduce postoperative infectious morbidity: a randomized, controlled trial

Author(s): Haas D.M.; Pazouki F.; Smith R.R.; Fry A.M.; Podzielinski I.; Al-Darei S.M.; Golichowski A.M.

Source: American Journal of Obstetrics and Gynecology; Mar 2010; vol. 202 (no. 3); p. 310

Publication Date: Mar 2010

Publication Type(s): Article

PubMedID: 20207251

Abstract: Objective: The objective of the study was to determine whether vaginal preparation with povidone iodine before cesarean delivery decreased the risk of postoperative maternal morbidities. Study Design: The design of the study was a randomized, controlled trial in women undergoing cesarean delivery with subjects assigned to have a preoperative vaginal cleansing with povidone iodine or to a standard care group (no vaginal wash). The primary outcome was a composite of postoperative fever, endometritis, sepsis, readmission, wound infection, or complication. Results: There were 155 vaginal cleansing subjects and 145 control subjects. Overall, 9.0% developed the composite outcome, with fewer women in the cleansing group (6.5%) compared with the control group (11.7%), although the difference was not statistically significant (relative risk, 0.55; 95% confidence interval, 0.26-1.11; P = .11). Length of surgery, being in labor, and having a dilated cervix were all associated with the composite morbidity outcome. Conclusion: Vaginal cleansing with povidone iodine before cesarean delivery may decrease postoperative morbidities, although the reduction is not statistically significant.

Database: EMBASE

13. Adjunctive intravaginal metronidazole for the prevention of postcesarean endometritis: a randomized controlled trial.

Author(s): Pitt, C; Sanchez-Ramos, L; Kaunitz, A M

Source: Obstetrics and gynecology; Nov 2001; vol. 98 (no. 5); p. 745-750

Publication Date: Nov 2001

Publication Type(s): Randomized Controlled Trial Clinical Trial Journal Article

PubMedID: 11704163

Available in full text at Obstetrics and Gynecology - from Ovid

Abstract:OBJECTIVETo estimate the efficacy of preoperative administration of intravaginal metronidazole for the prevention of postcesarean endometritis.METHODSThis double-masked, placebo-controlled randomized trial included patients of at least 24 weeks' gestation undergoing cesarean deliveries for various indications. Patients were randomized to receive either 5 g of metronidazole gel intravaginally or matching placebo before the initiation of the cesarean. All patients underwent surgical cleansing of the abdomen, and most received prophylactic antibiotics after cord clamping. Patients with chorioamnionitis and/or suspected allergy to metronidazole were excluded. For a two-sided alpha of 0.05 and beta of 0.20 (80% power), 120 subjects were required in each group. The main outcome variable was the incidence of postcesarean endometritis. Secondary outcome variables included presence of febrile morbidity, wound infection, days on antibiotics, and length of postpartum hospitalization. Neonatal outcomes included birth weight, Apgar scores less than 7 at 5 minutes, umbilical arterial pH less than 7.16, admission and length of stay in the neonatal intensive care unit, and length of hospital stay.RESULTSOf 112 patients receiving metronidazole,

eight (7%) developed postcesarean endometritis, compared with 19 of 112 (17%) of those receiving placebo gel (relative risk 0.42, 95% confidence interval 0.19, 0.92). No significant differences were noted between treatment groups with respect to the other outcome variables.CONCLUSIONThe preoperative administration of 5 g of intravaginal metronidazole gel appears to reduce the incidence of postcesarean endometritis.

Database: Medline

Strategy 268273

#	Database	Search term	Results
1	Medline	(vagina* ADJ2 clean*).ti,ab	82
2	Medline	exp VAGINA/	32394
3	Medline	exp "ANTI-INFECTIVE AGENTS"/	1720343
4	Medline	(2 AND 3)	2753
5	Medline	(cesarean* OR caesarean* OR "c section*").ti,ab	51299
6	Medline	exp "CESAREAN SECTION"/	39859
7	Medline	(5 OR 6)	63481
8	Medline	(emergenc* OR urgen*).ti,ab	368037
9	Medline	exp EMERGENCIES/	37561
10	Medline	(8 OR 9)	381322
11	Medline	(1 AND 7 AND 10)	1
12	Medline	(4 AND 7 AND 10)	2
13	Medline	(1 AND 7)	13
14	Medline	(4 AND 7)	42
15	EMBASE	(vagina* ADJ2 clean*).ti,ab	102
16	EMBASE	(cesarean* OR caesarean* OR "c section*").ti,ab	72731
17	EMBASE	exp "CESAREAN SECTION"/	82143
18	EMBASE	exp "EMERGENCY	20386

		SURGERY"/	
19	EMBASE	(emergenc* OR urgen*).ti,ab	510888
20	EMBASE	(18 OR 19)	516968
21	EMBASE	(16 OR 17)	97712
22	EMBASE	(15 AND 20 AND 21)	4
23	EMBASE	(vagina* ADJ2 wash*).ti,ab	460
24	EMBASE	(20 AND 21 AND 23)	2
25	EMBASE	(15 AND 21)	24
26	EMBASE	(21 AND 23)	5
27	Medline	(vagina* ADJ2 wash*).ti,ab	402
28	Medline	(7 AND 10 AND 27)	0
29	Medline	(7 AND 27)	3
30	EMBASE	exp "POVIDONE IODINE"/	9074
31	EMBASE	(21 AND 30)	130
32	EMBASE	exp VAGINA/	34771
33	EMBASE	(31 AND 32)	8
34	EMBASE	(preoperative ADJ2 clean*).ti,ab	85
35	EMBASE	(21 AND 34)	16
36	EMBASE	(vagina* ADJ2 disinfect*).ti,ab	55
37	EMBASE	(21 AND 36)	5
38	Medline	(preoperative ADJ2 clean*).ti,ab	74
39	Medline	(vagina* ADJ2 disinfect*).ti,ab	60

40	Medline	(38 OR 39)	133
41	Medline	(7 AND 40)	15
42	Medline	exp "POVIDONE-IODINE"/	2542
43	Medline	(2 AND 7 AND 42)	7
44	EMBASE	(unscheduled).ti,ab	5378
45	EMBASE	(15 AND 21 AND 44)	0
46	EMBASE	(36 AND 44)	0
47	Medline	(unscheduled).ti,ab	3929
48	Medline	(4 AND 7 AND 47)	0
49	PubMed	(vagina* ADJ2 clean*).ti,ab	490
50	PubMed	(vagina* ADJ2 disinfect*).ti,ab	337
51	PubMed	(vagina* ADJ2 wash*).ti,ab	2761
52	PubMed	(49 OR 50 OR 51)	3469
53	PubMed	(cesarean* OR caesarean* OR "c section*").ti,ab	64170
54	PubMed	(52 AND 53)	265
55	PubMed	(unscheduled OR emergenc* OR urgen* OR unelective).ti,ab	483048
56	PubMed	(54 AND 55)	16
57	EMBASE	(vagina* ADJ2 irrigat*).ti,ab	77
58	EMBASE	(20 AND 21 AND 57)	1
59	EMBASE	(21 AND 57)	3
61	Medline	(vagina*).ti,ab	95575

62	Medline	(7 AND 42 AND 61)	13
63	Medline	exp "ADMINISTRATION, INTRAVAGINAL"/	4235
64	Medline	(3 AND 7 AND 63)	19
65	EMBASE	exp "ANTIINFECTIVE AGENT"/va	1584
66	EMBASE	(17 AND 65)	34