**Appendix:**

Appendix 1: MOOSE checklist

|  |  |  |
| --- | --- | --- |
| Item number | Recommendation | Reported on page |
| Background | | |
| 1 | Problem definition | To systematically determine the incidence of wound infection and wound dehiscence following primary OASI repair (Page 4) |
| 2 | Hypothesis statement | Due to risk of wound complications following primary OASI repair, the Royal College of Obstetricians and Gynaecologists (RCOG) recommend prophylactic broad-spectrum antibiotic administration to reduce the risk of these post-operative complications. However, no meta-analysis has been conducted to determine epidemiological incidence of wound complications following primary OASI repair (page 5) |
| 3 | Description of study outcome(s) | The primary outcome of this study was the incidence of wound infection and wound dehiscence following primary OASI repair (page 5) |
| 4 | Type of exposure or intervention used | Eligible studies had to analyse incidence of wound infection and wound dehiscence following primary OASI repair (page 5) |
| 5 | Type of study design used | Prospective and retrospective observational studies, Case series and case reports were excluded. However, conference papers and abstracts of observational studies were included if they contained enough information regarding study design and outcome data (page 5) |
| 6 | Study population | Women undergoing primary OASI repair (page 5) |
| Search Strategy | | |
| 7 | Qualifications of searchers | Credentials are listed on the title page |
| 8 | Search strategy, including time period included in the synthesis and key words | Search strategy and selection criteria (page 5) and Appendix 2 |
| 9 | Effort to include all available studies, including contact with authors | Authors of included studies were contacted if the full text could not be retrieved (page 6) |
| 10 | Databases and registries searched | Medline, EMBASE, CINAHL, EMCARE, Cochrane and Trip Pro databases (page 5) |
| 11 | Search software used, name and version, including special features used | Zotero reference management system (page 5) |
| 12 | Use of hand searching | Additional references were manually searched from identified studies to find other relevant studies (page 5) |
| 13 | Lists of citations located and those excluded, including justification | Details of the literature search are described in the PRISMA flow chart (Figure 1) |
| 14 | Method of addressing articles published in languages other than English | Acknowledgments (page 13) |
| 15 | Method of handling abstracts and unpublished studies | Case reports, case series were excluded (page 5) |
| 16 | Description of any contact with authors | Authors of included studies were contacted if the full text was unobtainable and if the data reported was published in a manner that was unclear or not extractable (page 6) |
| Reporting of methods | | |
| 17 | Description of relevance or appropriateness of studies assembled for assessing the hypothesis to be tested | Search strategy and selection criteria (page 5) and Appendix 2 |
| 18 | Rationale for the selection and coding of data | Data extraction paragraph (page 6). Data extracted included study characteristics (authors, publication year, setting, sample size) and outcome measures (incidence of wound infection/wound dehiscence). |
| 19 | Documentation of how data were classified and coded | Data extraction paragraph (page 6). |
| 20 | Assessment of confounding | To avoid potential intervention bias, studies which were designed to investigate the effect of an intervention on wound complications following primary OASI repair were excluded (page 6). Methodological quality of the selected studies and risk of bias were assessed at an outcome level by the two reviewers (N.A.O, K.W.W) independently using the relevant tool from the Joanna Briggs Institute (page 7) |
| 21 | Assessment of study quality, including blinding of quality assessors, stratification or regression on possible predictors of study results | Methodological quality of the selected studies and risk of bias were assessed at an outcome level by the two reviewers (N.A.O, K.W.W) independently using the relevant tool from the Joanna Briggs Institute (page 7) |
| 22 | Assessment of heterogeneity | The heterogeneity among studies was calculated using the I2 statistic (page 6) |
| 23 | Description of statistical methods in sufficient detail to be replicated | The random-effects model was used if heterogeneity was significant (I2 > 50 %) (page 6) |
| 24 | Provision of appropriate table and graphics | We provided the PRISMA flow-chart, included/excluded study characteristics tables and forest plots |
| Results | | |
| 25 | Graphic summarising individual study estimates and overall estimate | Table 2, Figure 2,3,4 |
| 26 | Table giving descriptive information for each study included | Table 2 |
| 27 | Results of sensitivity testing | Figure 2, 3 |
| 28 | Indication of statistical uncertainty of findings | 95% confidence intervals were presented with all odd ratios and I2 values |
| Discussion | | |
| 29 | Quantitative assessment of bias | Methodological quality of the selected studies and risk of bias were assessed at an outcome level by the two reviewers (N.A.O, K.W.W) independently using the relevant tool from the Joanna Briggs Institute (page 7) |
| 30 | Justification for exclusion | Summary of excluded study table (Table1) |
| 31 | Assessment of quality of included studies | Methodological quality of the selected studies and risk of bias were assessed at an outcome level by the two reviewers (N.A.O, K.W.W) independently using the relevant tool from the Joanna Briggs Institute (page 7) |
| Conclusions | | |
| 32 | Consideration of alternative explanation for observed results | Limitations are discussed on page 11-12. Most important include, that there was no standardized outcome measure of wound infection or dehiscence. |
| 33 | Generalisation of the conclusions | The incidence of wound infection and wound dehiscence following 4 and 7 per 100 primary surgical repairs. The prediction incidence estimates from this review will be useful for clinicians when counselling women with OASIs and when consenting them for primary surgical repair. (page 9 , 12) |
| 34 | Guidelines for future research | A standardized definition of wound infection and dehiscence needs to be designed and validated to allow accurate comparisons to be drawn between different studies. (page 11) |
| 35 | Disclosure of funding source | No funding required |

Appendix 2:

Search Strategy:

Database: Ovid Emcare Search Strategy:

1 (Obstetric anal sphincter injur\* or (obstetric anal sphincter adj4 injury) or OASIS or obstetric anal sphincter trauma or (obstetric anal sphincter adj4 trauma) or obstetrical injury to the anal sphincter or third-degree perineal laceration\* or third degree perineal laceration\* or third-degree tear\* or third degree tear\* or fourthdegree laceration\* or fourth degree laceration\* or fourth-degree tear\* or fourth degree tear\* or severe perineal trauma or (severe perineal adj4 trauma) or third-degree perineal tear or third degree perineal tear\* or fourth-degree perineal tear\* or fourth degree perineal tear\* or (single adj3 perineum) or (superficial adj3 perineum) or (complete adj3 perineum) or (complicated complete adj3 perineum)).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (1375)

2 exp perineum/ (1819)

3 exp anal canal/ (294)

4 exp episiotomy/ (1659)

5 exp obstetric delivery/ (50807)

6 1 or 2 or 3 or 4 or 5 (53947)

7 primary surgical repair.mp. (71)

8 exp gynecology/ (9273)

9 exp obstetrics/ (10456)

10 7 or 8 or 9 (15038)

11 (wound infection or infected wound or infection in a wound).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (14429)

12 exp wound infection/ (12310)

13 11 or 12 (14429)

14 (wound dehiscence or dehisced wound or partial dehiscence or surgical wound dehiscence or surgical Incision dehiscence or wound breakdown).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (5587)

15 exp wound dehiscence/ (5197)

16 14 or 15 (5587)

17 6 and 13 and 16 (93)

18 6 and 10 and 13 (12)

19 6 and 10 and 16 (9)

20 1 and 10 and 13 (3)

21 1 and 10 and 16 (1)

22 1 and 13 (20)

23 1 and 16 (7)

24 17 not cesarean.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (22)

25 "obstetric perineum anal infection".mp. (0)

26 "maternal peripartum infection".mp. (2)

27 "postpartum infection".mp. or exp puerperal infection/ (520)

28 exp perineum injury/ (1138)

29 "breakdown of perineal laceration repair".mp. (1)

30 "obstetric perineal wound infection".mp. (1)

31 exp puerperal infection/ (499)

32 "postpartum perineal wound infection".mp. (0)

33 13 and 27 (39)

34 16 and 27 (8)

35 34 not cesarean.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (1)

36 28 not cesarean.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (885)

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Database: Ovid Emcare

Search Strategy: -------------------------------------------------------------------------------- 1 (Obstetric anal sphincter injur\* or (obstetric anal sphincter adj4 injury) or OASIS or obstetric anal sphincter trauma or (obstetric anal sphincter adj4 trauma) or obstetrical injury to the anal sphincter or third-degree perineal laceration\* or third degree perineal laceration\* or third-degree tear\* or third degree tear\* or fourthdegree laceration\* or fourth degree laceration\* or fourth-degree tear\* or fourth degree tear\* or severe perineal trauma or (severe perineal adj4 trauma) or third-degree perineal tear or third degree perineal tear\* or fourth-degree perineal tear\* or fourth degree perineal tear\* or (single adj3 perineum) or (superficial adj3 perineum) or (complete adj3 perineum) or (complicated complete adj3 perineum)).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (1375)

2 exp perineum/ (1819)

3 exp anal canal/ (294)

4 exp episiotomy/ (1659)

5 exp obstetric delivery/ (50807)

6 1 or 2 or 3 or 4 or 5 (53947)

7 primary surgical repair.mp. (71)

8 exp gynecology/ (9273)

9 exp obstetrics/ (10456)

10 7 or 8 or 9 (15038)

11 (wound infection or infected wound or infection in a wound).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (14429)

12 exp wound infection/ (12310)

13 11 or 12 (14429)

14 (wound dehiscence or dehisced wound or partial dehiscence or surgical wound dehiscence or surgical Incision dehiscence or wound breakdown).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (5587)

15 exp wound dehiscence/ (5197)

16 14 or 15 (5587)

17 6 and 13 and 16 (93)

18 6 and 10 and 13 (12)

19 6 and 10 and 16 (9)

20 1 and 10 and 13 (3)

21 1 and 10 and 16 (1)

22 1 and 13 (20)

23 1 and 16 (7)

24 17 not cesarean.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (22)

25 "obstetric perineum anal infection".mp. (0)

26 "maternal peripartum infection".mp. (2)

27 "postpartum infection".mp. or exp puerperal infection/ (520)

28 exp perineum injury/ (1138)

29 "breakdown of perineal laceration repair".mp. (1)

30 "obstetric perineal wound infection".mp. (1)

31 exp puerperal infection/ (499)

32 "postpartum perineal wound infection".mp. (0)

33 13 and 27 (39)

34 16 and 27 (8)

35 34 not cesarean.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (1)

36 28 not cesarean.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (885)

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Database: Ovid MEDLINE(R) and In-Process & Other Non-Indexed Citations and Daily Search Strategy: -------------------------------------------------------------------------------- 1 (Obstetric anal sphincter injur\* or (obstetric anal sphincter adj4 injury) or OASIS or obstetric anal sphincter trauma or (obstetric anal sphincter adj4 trauma) or obstetrical injury to the anal sphincter or third-degree perineal laceration\* or third degree perineal laceration\* or third-degree tear\* or third degree tear\* or fourthdegree laceration\* or fourth degree laceration\* or fourth-degree tear\* or fourth degree tear\* or severe perineal trauma or (severe perineal adj4 trauma) or third-degree perineal tear or third degree perineal tear\* or fourth-degree perineal tear\* or fourth degree perineal tear\* or (single adj3 perineum) or (superficial adj3 perineum) or (complete adj3 perineum) or (complicated complete adj3 perineum)).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating subheading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] (4160)

2 exp Perineum/su [Surgery] (2830)

3 exp Anal Canal/ (18508)

4 exp Episiotomy/ (2220)

5 exp Delivery, Obstetric/ (81810)

6 1 or 2 or 3 or 4 or 5 (105147)

7 primary surgical repair.mp. (249)

8 exp Gynecology/su [Surgery] (269)

9 exp Obstetrics/su [Surgery] (17)

10 7 or 8 or 9 (530)

11 (wound infection or infected wound or infection in a wound).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating subheading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] (59692)

12 exp wound infection/ or exp surgical wound infection/ (47886)

13 11 or 12 (59692)

14 (wound dehiscence or dehisced wound or partial dehiscence or surgical wound dehiscence or surgical Incision dehiscence or wound breakdown).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating subheading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] (11606)

15 exp Surgical Wound Dehiscence/ (7503)

16 14 or 15 (11606)

17 6 and 10 and 13 and 16 (0)

18 6 and 10 and 13 (1)

19 6 and 10 and 16 (1)

20 6 and 13 (1594)

21 1 and 13 (32)

22 6 and 16 (610)

23 1 and 16 (12)

24 exp Surgical Wound Dehiscence/su [Surgery] (1510)

25 1 and 10 and 13 and 16 (0)

26 1 and 10 and 13 (0)

27 1 and 10 and 16 (0)

28 exp Wound Infection/ (47886)

29 11 or 28 (59692)

30 6 and 10 and 29 (1)

31 6 and 10 and 16 and 29 (0)

32 6 and 29 (1594)

33 1 or 2 (6933)

34 29 and 33 (190)

35 1 and 32 (32)

36 1 and 10 and 15 (0)

37 1 and 16 (12)

38 1 or 2 (6933)

39 32 and 38 (190)

40 1 and 10 and 29 and 35 (0)

41 1 and 29 (32)

42 29 and 38 (190)

43 6 and 29 (1594)

44 10 and 43 (1)

45 "obstetric anal sphincter injury breakdown".mp. (1)

46 perineal breakdown.mp. (4)

47 "obstetric perineum anal infection".mp. (0)

48 "maternal peripartum infection".mp. (6)

49 "postpartum infection".mp. (200)

50 "breakdown of perineal laceration repair".mp. (2)

51 "obstetric perineal wound infection".mp. (1)

52 "postpartum perineal wound infection".mp. (0)

53 35 not cesarean.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] (27)

54 42 not cesarean.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] (183)

55 49 not cesarean.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] (117)

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Database: Cochrane

ID Search

#1 (Obstetric anal sphincter injur\* or (obstetric anal sphincter adj4 injury) or OASIS or obstetric anal sphincter trauma or (obstetric anal sphincter adj4 trauma) or obstetrical injury to the anal sphincter or third-degree perineal laceration\* or third degree perineal laceration\* or third-degree tear\* or third degree tear\* or fourth-degree laceration\* or fourth degree laceration\* or fourth-degree tear\* or fourth degree tear\* or severe perineal trauma or (severe perineal adj4 trauma) or third-degree perineal tear or third degree perineal tear\* or fourth-degree perineal tear\* or fourth degree perineal tear\* or (single adj3 perineum) or (superficial adj3 perineum) or (complete adj3 perineum) or (complicated complete adj3 perineum)).

#2 MeSH descriptor: [Perineum] explode all trees

#3 MeSH descriptor: [Anal Canal] explode all trees

#4 MeSH descriptor: [Episiotomy] explode all trees

#5 MeSH descriptor: [Delivery, Obstetric] explode all trees

#6 #1 or #2 or #3 or #4 or #5

#7 primary surgical repair

#8 MeSH descriptor: [Gynecology] explode all trees

#9 MeSH descriptor: [Obstetrics and Gynecology Department, Hospital] explode all trees

#10 #7 or #8 or #9

#11 wound infection or infected wound or infection in a wound

#12 MeSH descriptor: [Wound Infection] explode all trees

#13 #11 or #12

#14 wound dehiscence or dehisced wound or partial dehiscence or surgical wound dehiscence or surgical Incision dehiscence or wound breakdown

#15 MeSH descriptor: [Surgical Wound Dehiscence] explode all trees

#16 #14 or #15

#17 #6 and #10 and #13 and #16

#18 #6 and #10 and #13

#19 #6 and #10 and #16

#20 #6 and #13

#21 #6 and #16

#22 #17 not cesarean

#23 #18 not cesarean

#24 #19 not cesarean

#25 "obstetric anal sphincter injury breakdown"

#26 perineal breakdown

#27 "obstetric perineum anal infection"

#28 "maternal peripartum infection"

#29 "postpartum infection"

#30 "breakdown of perineal laceration repair"

#31 "obstetric perineal wound infection"

#32 "postpartum perineal wound infection"

#33 Puerperal Infection

#34 #1 and #29 and #13

#35 #1 and #29 and #16

#36 #1 and #13 and #26

#37 #1 and #10 and #13

#38 #1 and #10 and #16

#39 #38 not cesarean

#40 #1 and #10 and #12

#41 #34 not cesarean

#42 #40 not caesarean

Database Cinahl:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Search ID#** | **Search Terms** | **Search Options** | **Last Run Via** | **Results** |
| S38 | s30 not cesarean | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S37 | s24 not cesarean | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S36 | s19 not cesarean | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S35 | s18 not cesarean | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S34 | s17 not cesarean | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S33 | S20 not cesarean | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S32 | "obstetric perineal wound infection" | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S31 | "breakdown of perineal laceration repair" | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S30 | "postpartum infection" | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S29 | "maternal peripartum infection" | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S28 | "obstetric perineum anal infection" | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S27 | "perineal breakdown" | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S26 | "obstetric anal sphincter injury breakdown" | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S25 | S1 AND S15 | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S24 | S1 AND S12 | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S23 | S1 AND S9 AND S15 | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S22 | S1 AND S9 AND S12 | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S21 | S1 AND S9 AND S12 AND S15 | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S20 | S5 AND S15 | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S19 | S5 AND S12 | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S18 | S5 AND S9 AND S15 | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S17 | S5 AND S9 AND S12 | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S16 | S5 AND S9 AND S12 AND S15 | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S15 | S13 OR S14 | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S14 | (MM "Surgical Wound Dehiscence") | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S13 | wound dehiscence or dehisced wound or partial dehiscence or surgical wound dehiscence or surgical Incision dehiscence or wound breakdown | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S12 | S10 OR S11 | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S11 | (MH "Wound Infection+") | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S10 | wound infection or infected wound or infection in a wound | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S9 | S6 OR S7 OR S8 | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S8 | (MH "Surgery, Gynecologic+") | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S7 | (MH "Surgery, Obstetrical+") | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S6 | primary surgical repair | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S5 | S1 OR S2 OR S3 OR S4 | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S4 | (MH "Delivery, Obstetric+") | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S3 | (MM "Perineum") | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |
| S2 | "obstetric anal sphincter injury" OR (MM "Anus") | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | 1,530 |
| S1 | (Obstetric anal sphincter injur\*) or (obstetric anal sphincter adj4 injury) or OASIS or (obstetric anal sphincter trauma) or (obstetric anal sphincter adj4 trauma) or obstetrical injury to the anal sphincter or third-degree perineal laceration\* or third degree perineal laceration\* or third-degree tear\* or third degree tear\* or fourth-degree laceration\* or fourth degree laceration\* or fourth-degree tear\* or fourth degree tear\* or (severe perineal trauma) or (severe perineal adj4 trauma) or third-degree perineal tear or third degree perineal tear\* or fourth-degree perineal tear\* or fourth degree perineal tear\* or (single adj3 perineum) or (superficial adj3 perineum) or (complete adj3 perineum) or (complicated complete adj3 perineum) | Expanders - Apply equivalent subjects Search modes - Boolean/Phrase | Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL | Display |

**Appendix 3:**

**Table A3:** Overview of excluded studies

|  |  |  |  |
| --- | --- | --- | --- |
| **Author (Year)** | **Title** | **Journal** | **Reason for Exclusion** |
| Giugale et al (2017) | Prophylactic antibiotics at the time of obstetric anal sphincter injury repair: Are we meeting the mark? | Female Pelvic Medicine and Reconstructive Surgery | No information on infection/wound dehiscence rates |
| MacLaren et al (2017) | Three-year experience of delayed secondary closure of obstetric anal sphincter injuiries | BJOG: An International Journal of Obstetrics and Gynaecology | Wound infection/dehiscence rate after secondary closure, not primary |
| Calvia et al (2015) | Surgical site infection surveillance-perineal wounds 2015 | BJOG: An International Journal of Obstetrics and Gynaecology | No information on number of women with OASI (rate of infection after OASI=0) |
| MacLaren et al (2016) | An unrecognised burden of childbirth-anal sphincter injury: Prevention is preferable to cure but cure is still feasible in a low income country | BJOG: An International Journal of Obstetrics and Gynaecology | Unrepaired OASI |
| Leader-Cramer et al (2015) | Risk factors for wound complication in women with obstetric anal sphincter injuries | Neurourology and Urodynamics | Abstract submission of Lewicky-Guapp (2015) study included in meta-analysis |
| Pandian et al (2014) | Standards in the management of 3rd and 4th degree perineal tear: A retrospective audit | BJOG: An International Journal of Obstetrics and Gynaecology | Conference abstract- Not enough information surrounding outcome data (62% follow-up) |
| Dudley et al (2013) | Secondary suturing compared to non-suturing for broken down perineal wounds following childbirth | Cochrane Database of Systematic Reviews | Included studies reviewed |
| Duggal et al (2008) | Antibiotic prophylaxis for prevention of postpartum perineal wound complications: A randomized controlled trial | Obstetrics and Gynecology | Data from experimental study designed to reduce risk of infection/wound dehiscence |
| Lewicky-Gaupp et al (2021) | Early Secondary Repair of Obstetric Anal Sphincter Injury Breakdown: Contemporary Surgical Techniques and Experiences From a Peripartum Subspecialty Clinic | Female pelvic medicine & reconstructive surgery | Only outcomes reported from broken down wounds, also includes missed OASI |
| DeAndrade et al (2019) | Perineal breakdown after vaginal delivery: What happens next? | Female Pelvic Medicine and Reconstructive Surgery | Conference abstract-Not enough information on number of OASI (Denominator is perineal breakdown, not number of OASI, meaning overall number of OASI unknown) |
| Coluccia et al (2019) | Outcomes in patients with OASIS: What is the impact of the experience of the surgeon? | Neurourology and Urodynamics | Wound infection/dehiscence not an outcome measure |
| Jallad et al (2016) | Breakdown of Perineal Laceration Repair after Vaginal Delivery: A Case-Control Study | Female Pelvic Medicine and Reconstructive Surgery | Denominator is perineal breakdown, not number of OASI, meaning overall number of OASI unknown |
| Okeahialam et al (2020) | Early re-suturing of dehisced obstetric perineal wounds: A 13-year experience | European Journal of Obstetrics and Gynecology and Reproductive Biology | Denominator is perineal breakdown, not number of OASI, meaning overall number of OASI unknown |
| Jones et al (2019) | The incidence of wound infection and dehiscence following childbirth-related perineal trauma: A systematic review of the evidence | European Journal of Obstetrics and Gynecology and Reproductive Biology | Included studies reviewed |
| Rotem et al (2020) | The use of metronidazole in women undergoing obstetric anal sphincter injuries: a systematic review of the literature. | Archives of gynecology and obstetrics | Included studies reviewed |
| Cawichet et al (2008) | Management of obstetric anal sphincter injuries at the University Hospital of the West Indies. | The West Indian medical journal | Case series |
| Williams et al (2006) | Risk factors for the breakdown of perineal laceration repair after vaginal delivery. | American journal of obstetrics and gynecology | Includes second degree tears, with no sub-group analysis |
| Woodd et al (2019) | Incidence of maternal peripartum infection: A systematic review and meta-analysis. | PloS medicine | Caesarean section and perineal wound infection combined |
| Fox et al (2011) | Challenges: perineal wound care in the community. | World of Irish Nursing & Midwifery | No statistical analysis, not enough information provided |
| Ridley at al (2015) | Perineal wound infections: an audit. | Practising Midwife | No sub-group analysis of those with infection with OASI |
| Buppasiri et al (2014) | Antibiotic prophylaxis for third- and fourth-degree perineal tear during vaginal birth. | Cochrane Database of Systematic Reviews | Included studies reviewed |
| Knight et al (2019) | Prophylactic antibiotics in the prevention of infection after operative vaginal delivery (ANODE): a multicentre randomised controlled trial. | Lancet | OASI excluded |
| Harper et al (2014) | Impact of obesity on maternal and neonatal outcomes in insulin-resistant pregnancy | American Journal of Perinatology | Wound infection/dehiscence not an outcome measure |
| Mitchell et al (2020) | Impact of Excess Weight Gain on Risk of Postpartum Infection in Class III Obesity | AJP Reports | Caesarean section and perineal wound infection combined, OASI rate not measured |
| Axelsson at al (2018) | Postpartum infection in relation to maternal characteristics, obstetric interventions and complications | Journal of Perinatal Medicine | Caesarean section and perineal wound infection combined, |
| Stock et al (2013) | Maternal and Neonatal Outcomes of Successful Kielland’s Rotational Forceps Delivery | Obstetrics & Gynaecology | Episiotomy and OASI combined |
| O’Leary et al (1965) | The complete episiotomy. | Obstetrics & Gynaecology | Episiotomy and OASI combined |
| Otoide et al (1999) | Episiotomy in Nigeria. | International Journal of Gynaecology & Obstetrics | No subgroup analysis of OASO |
| Lam et al (2006) | The practice of episiotomy in public hospitals in Hong Kong. | Hong Kong Medical Journal | No subgroup analysis of OASI |