

# Uterine Exteriorisation versus Intraperitoneal Repair at Caesarean Section

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# A Systematic Review of the Literature

- For inclusion into the Cochrane Library  
2003

# In or Out



# Background

- Initially proposed in 1882 by Sanger,
  - Technique modified in 1884 by Leopold
- Concept still valid today
- C/S accounts for up to 70% of all deliveries in some settings
- Many variations of the technique suggested
- Few RCTs done: 1978 – 1999

# Objectives

- To assess the effects of exteriorisation of the uterus, as compared to the effects of uterine closure within the abdominal cavity

# Criteria for considering studies for this review

- Studies – randomised controlled trials
- Participants – women undergoing C/S, elective or as emergency procedure
- Interventions – uterine exteriorisation vs in situ repair
- Outcome measures – primary / secondary

# Primary Outcome Measures

- Serious operative complications
- Blood loss – (peri-operative drop in Hct or Hb)
- Post-operative sepsis

# Secondary outcome measures

- Duration of operation
- Pain (intra-/post-operative)
- Nausea / vomiting
- Failure of the procedure
- Requirements for blood transfusion
- Length of hospital stay



# Secondary Outcome measures (contd.)

- Wound complications
- Febrile morbidity (T >38 C >3 days)
- Endometritis
- Satisfaction with operation
- Deep vein thrombosis

# Search Strategy for identification of studies

Relevant trials identified in:

- Pregnancy & Childbirth Group's Specialised Register of Controlled Trials
- Cochrane Central Trials Register
- Pubmed
- Hand searching of reference lists of recent papers

# Methods of review

- Data extracted from published trial reports
- All randomised controlled trials included
- Statistical analyses performed using Revman 4.1 software (Revman 2000)
- Categorical data – relative risk & 95% CI
- Continuous data – weighted mean difference & 95% CI

# Description of Studies

- Hershey 1978 (N = 308)
- Magann 1993(A) (N = 100)
- Magann 1993(B) (N = 120)
- Magann 1995 (N = 284)
- Edi-Osagie 1998 (N = 194)
- Wahab 1999 (N = 288 )

# Methodological quality of studies

- Method of randomisation explained (6)
- Types of participants, interventions, outcomes clearly defined (6)
- Analysis by intention to treat (2)
- Allocation of concealment (unclear in 4)
- Protocol violations (3)

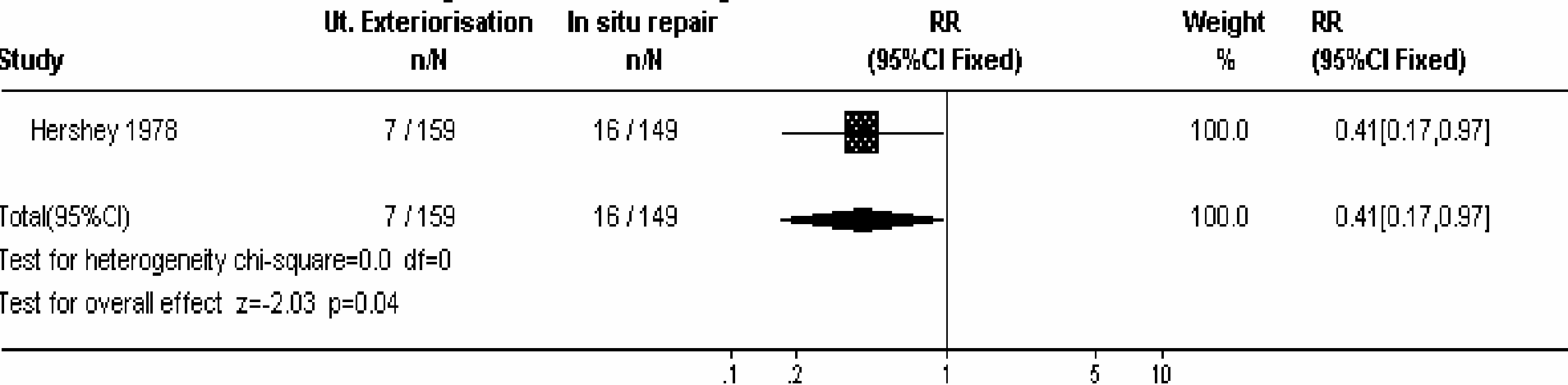
# Results

- 1294 women randomised
- Data analysed by meta-analysis, where possible
- Febrile morbidity - statistically significant less in women undergoing exteriorisation
- Other outcomes – no statistically significant differences between the groups
- Uterine angle tear only documented in 1 study (1 pt. in each group)

# Meta analysis - febrile morbidity

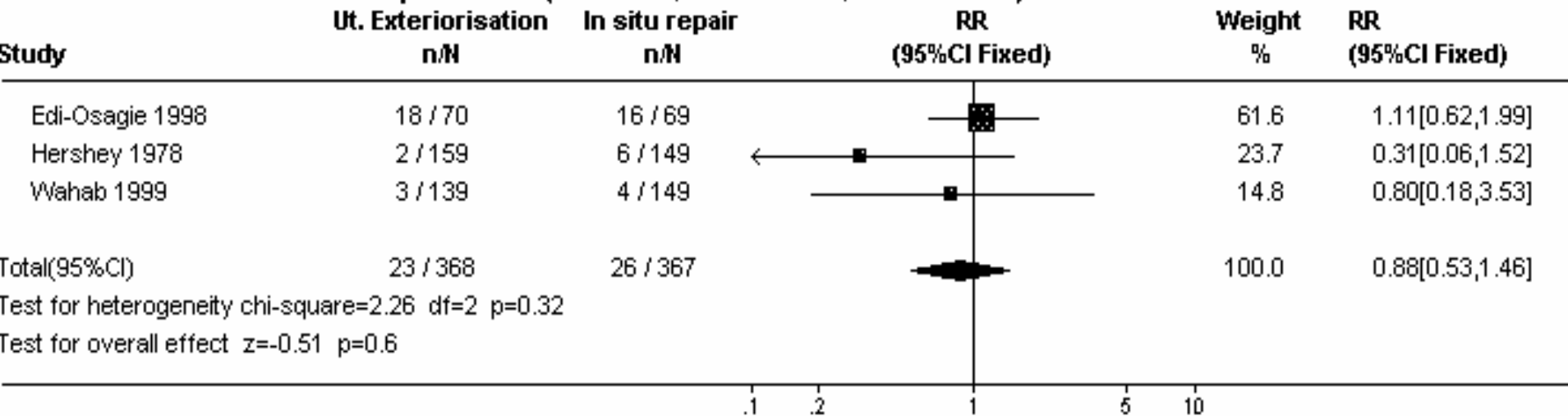
Comparison: 01 Uterine exteriorization vs intraperitoneal repair at caesarean section

Outcome: 04 Febrile morbidity for more than 3 days



# Meta analysis – wound complications

Comparison: 01 Uterine exteriorization vs intraperitoneal repair at caesarean section  
 Outcome: 06 Wound complications (infection, hematoma, breakdown)





# Discussion

- Few RCTs done on this subject
- Three studies reported by the same author (Magann 1993, 1993, 1995)
- Febrile morbidity shows a significant difference in favour of exteriorisation of the uterus
- Meta analyses of other outcomes show no significant differences between the groups
- Rare complications must be borne in mind

# Conclusion

From the data available, exteriorisation of the uterus at C/S seems to be a valid option, with no increased morbidity, as compared to in situ repair.

In cases where exposure is difficult, or there is protracted hemorrhage, exteriorisation of the uterus may be helpful.

# Implications for Research

- Available data does not allow to draw conclusions about rare outcomes
- Few clinical trials conducted
- Relatively small sample sizes

# Survey of methods of uterine closure at C/S among Reprod. Health PGC participants 2003 (15)

- Awareness of different methods of uterine closure 94%
- Practice of Ut. Ext 80%
- Practice of In Situ repair 13%
- Recommend Ut. Ext 13%
- Recommend In Situ repair 33%
- Recommend both procedures 40%

The End

Thank You!!