

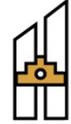
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Perineal techniques during the second stage of labour for reducing perineal trauma

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Background

for performing a review



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Increasing prevalence

National plan in Norway evidence based?

Discussions of the effect of perineal support techniques in Norway

Classification

First degree tears: perineal skin only

Second degree tears: perineal muscles and skin

Third degree tears: anal sphincter complex

- 3a: < 50% of the external sphincter
- 3b: > than 50% of the external sphincter
- 3c: internal and external sphincter

Fourth degree tears: anal sphincter complex and anal epithelium

Episiotomy: a surgical incision of the perineum

Fernando RJ, Williams AA, Adams EJ. The Management of Third and Fourth Degree Perineal Tears. RCOG Green top Guidelines 2007;29:11pages.

Kettle C, Tohill S. Perineal care. Clinical Evidence (online) 2008 Sep 24. [PUBMED: 19445799]

Incidence

- Some perineal trauma 85% (McCandlish 1998)
- Trauma that affect the anal sphincter 0.5-7.0% (Sultan 1999), usually between 0.5 and 2.5% (Byrd 2005)

Morbidity

- Short- and long-time morbidity
 - Pain (Macarthur 2004)
 - Dyspareunia (Barrett 2000)
 - Fecal incontinence (Sultan 2002)
 - Ability to cope with the daily tasks of motherhood (Sleep 1991)

Perineal techniques

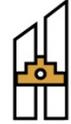
- Perineal massage
- Warm compresses
- Perineal management techniques

Perineal management techniques

- The flexion technique
- Ritgen's manoeuvre

Reducing perineal trauma by reducing the presentation diameter of the fetal head

The flexion technique



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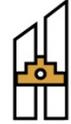
-involves the maintenance of flexion of the emerging head, by exerting pressure on the emerging occiput in a downwards direction towards the perineum, preventing extension until crowning; and the guarding of the perineum by placing a hand against the perineum to support this structure

Ritgen's maneuver

-the fetal chin is reached for between the anus and coccyx and pulled interiorly, while using the fingers of the other hand on the fetal occiput to control the speed of the delivery and keep the flexion of the head.

- Modified Ritgen's maneuver

The support techniques



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- slow down the birth of the head, allowing the perineum to stretch slowly, thus reducing perineal trauma (Downe 2003)

Objective

To assess the effect of perineal techniques during the second stage of labour on the incidence and morbidity associated with perineal trauma.

Methods

Studies: randomised and quasi randomised controlled trials evaluating perineal techniques during the second stage

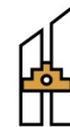
Participants: pregnant women planning to have a spontaneous vaginal delivery

Interventions

- Any perineal technique:
 - perineal massage
 - flexion technique
 - Ritgen's manoeuvre
 - warm compresses,
 - hands-on
 - hands-poised etc

Outcomes

- intact perineum
- perineal trauma not requiring suturing
- perineal trauma requiring suturing
- first-degree perineal tear
- second-degree perineal tear
- third-degree perineal tear
- fourth-degree perineal tear
- incidence of episiotomy



- Search methods for identification of studies
- Standard methods for selection of studies, data extraction and management

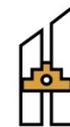
Results

We included 8 trials involving 11 651 women

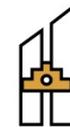
- hospital settings in USA, Australia, Brazil, Sweden, Austria and the UK
- nulliparous and multiparous women

Interventions

- Warm compresses held to the mothers perineum versus hands-off (Albers 2005)
- Perineal massage inside the women's vagina versus hands-off (Albers 2005)
- Warm packs on the perineum versus not having warm packs (Dahlen 2007)



- Hands-off versus hands-on the perineum (Mc Candlish 1998, Mayerhofer 2002, De Costa 2006)
- Massage (and stretching) of the perineum versus no massage (Stamp 2001)
- Modified Ritgen's manoeuvre versus standard practice (Jönsson 2008)



- Application of petroleum jelly to the perineum versus no application (Araujo 2008)

Methodological quality



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	Random sequence generation (selection bias)	Allocation concealment (selection bias)	Blinding (performance bias and detection bias)	Incomplete outcome data (attrition bias)	Selective reporting (reporting bias)	Other bias
Albers 2005	+	+	-	+	?	+
Araujo 2008	+	+	-	+	+	+
Dahlen 2007	+	+	-	+	+	+
De Costa 2006	+	?	-	?	?	+
Jönsson 2008	+	+	-	+	+	+
Mayerhofer 2002	-	-	-	+	?	+
McCandlish 1998	+	+	-	+	+	+
Stamp 2001	+	+	-	+	+	+

Effect of interventions

Hands off versus hands on

Warm compresses versus control

Massage versus control

Ritgens manoeuvre versus standard
care

Hands off vs. hands on

3 studies

(McCandlish 1998, Mayerhofer 2002, de Costa 2006)



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No effect on third and fourth degree tears

No effect on intact perineum

Significant effect on episiotomy

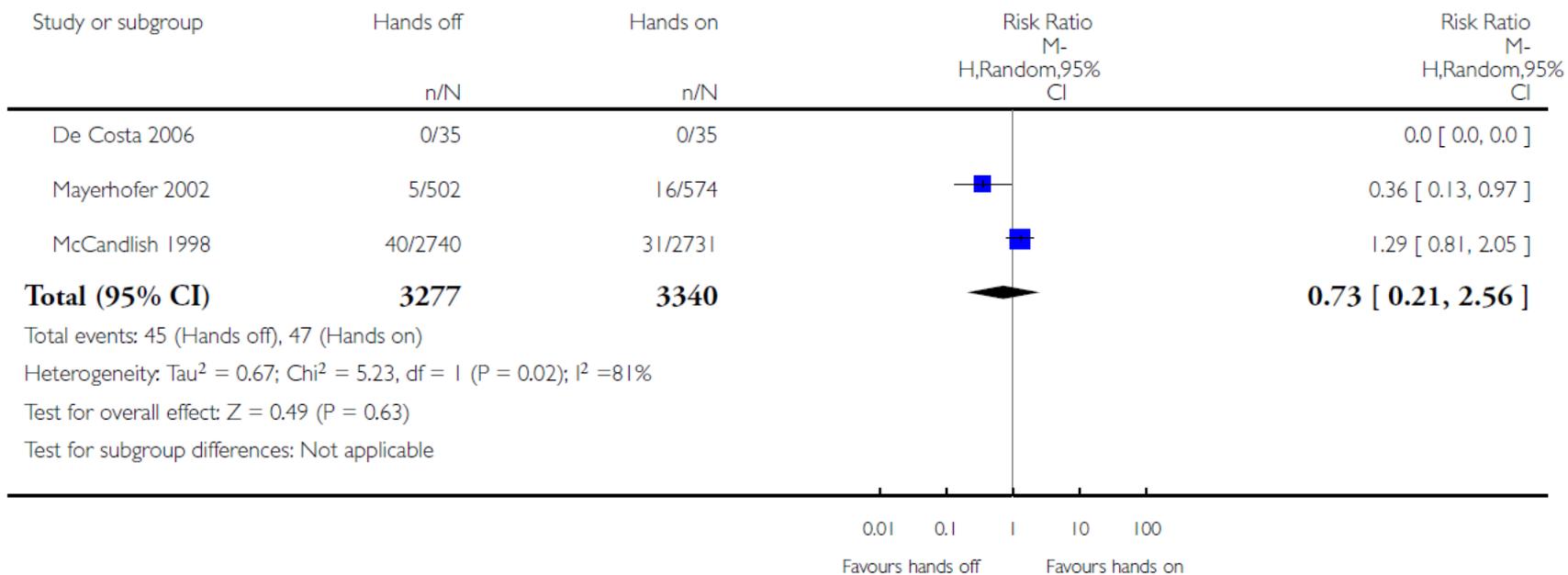
Hands off vs. hands on 3rd and 4th degree tears

Analysis 1.1. Comparison 1 Hands off (or poised) versus hands on, Outcome 1 3rd or 4th degree tears.

Review: Perineal techniques during the second stage of labour for reducing perineal trauma

Comparison: 1 Hands off (or poised) versus hands on

Outcome: 1 3rd or 4th degree tears



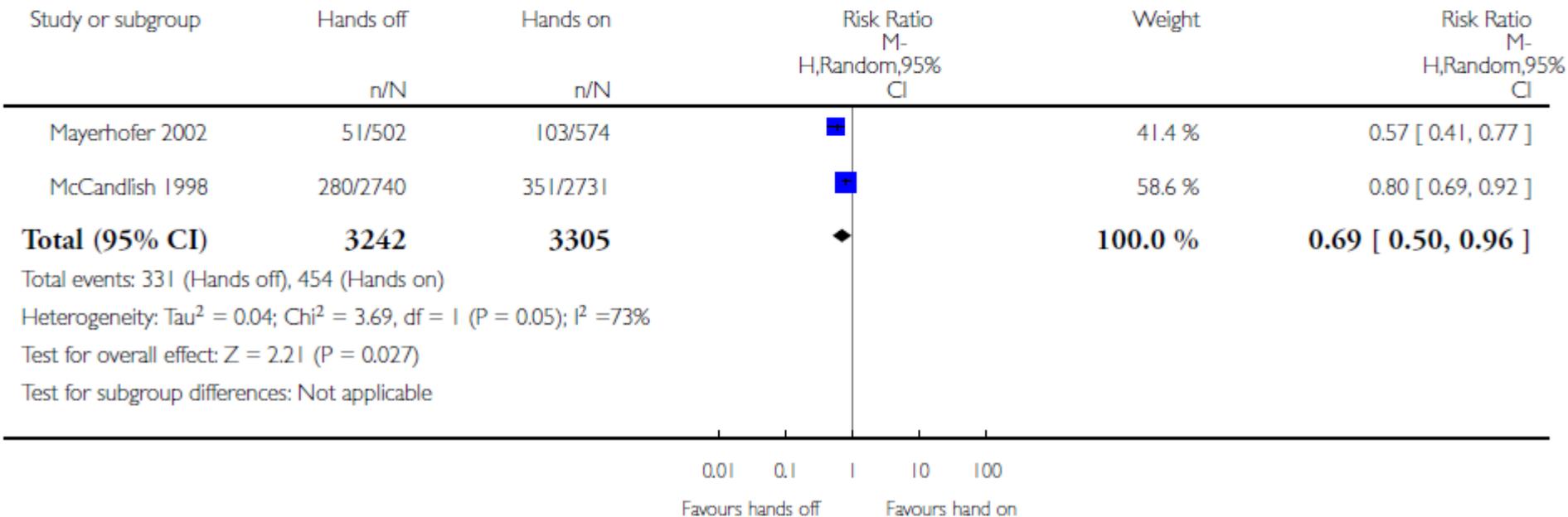
Hands off vs. hands on episiotomy

Analysis 1.2. Comparison 1 Hands off (or poised) versus hands on, Outcome 2 Episiotomy.

Review: Perineal techniques during the second stage of labour for reducing perineal trauma

Comparison: 1 Hands off (or poised) versus hands on

Outcome: 2 Episiotomy



Warm compresses vs. control

2 studies (Albers 2005, Dahlen 2007)

Significant effect on third- and fourth-degree tears

No effect on episiotomy

No effect on intact perineum

Warm compresses

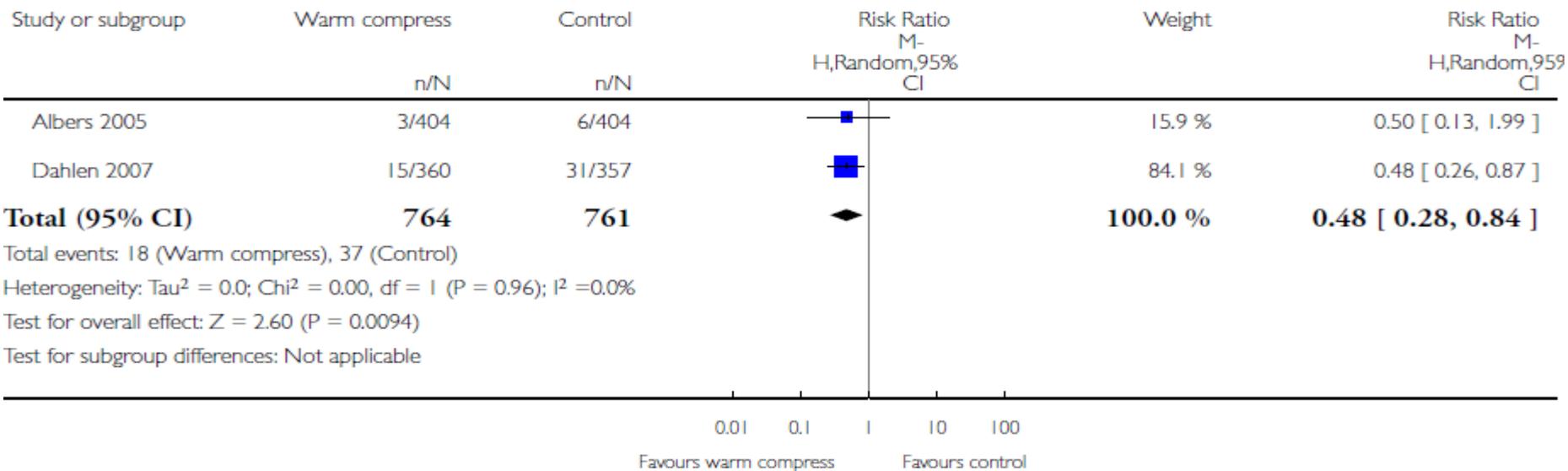
3rd and 4th degree tears

Analysis 2.1. Comparison 2 Warm compresses versus control (hands off or no warm compress), Outcome 1 3rd or 4th degree tears.

Review: Perineal techniques during the second stage of labour for reducing perineal trauma

Comparison: 2 Warm compresses versus control (hands off or no warm compress)

Outcome: 1 3rd or 4th degree tears



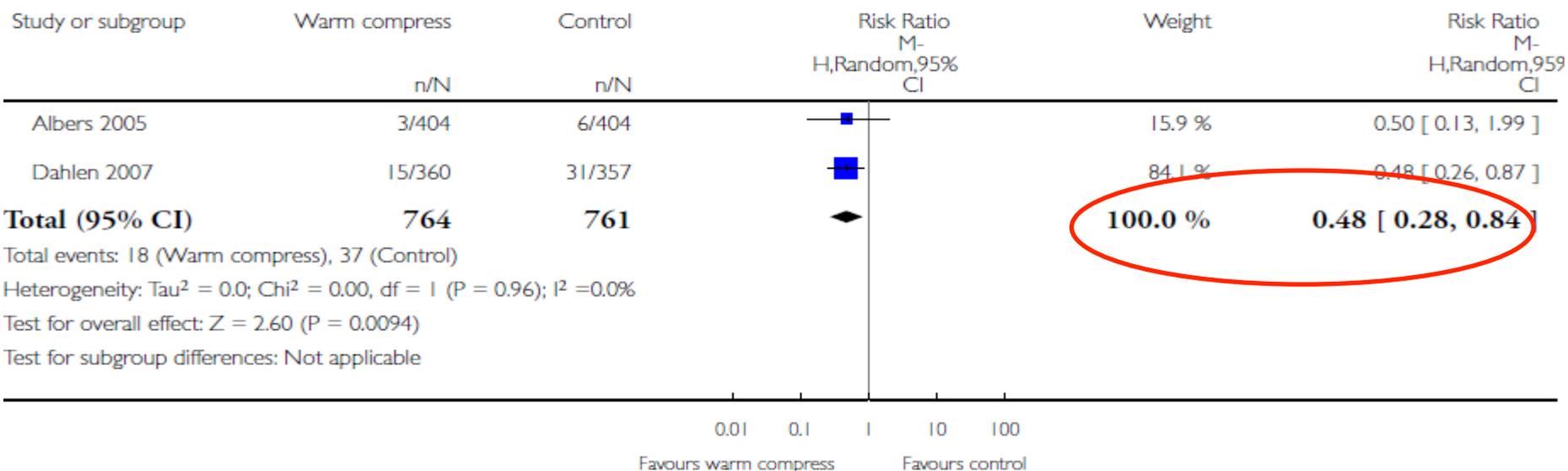
Warm compresses 3rd and 4th degree tears

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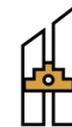
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Warm compresses 3rd and 4th degree tears



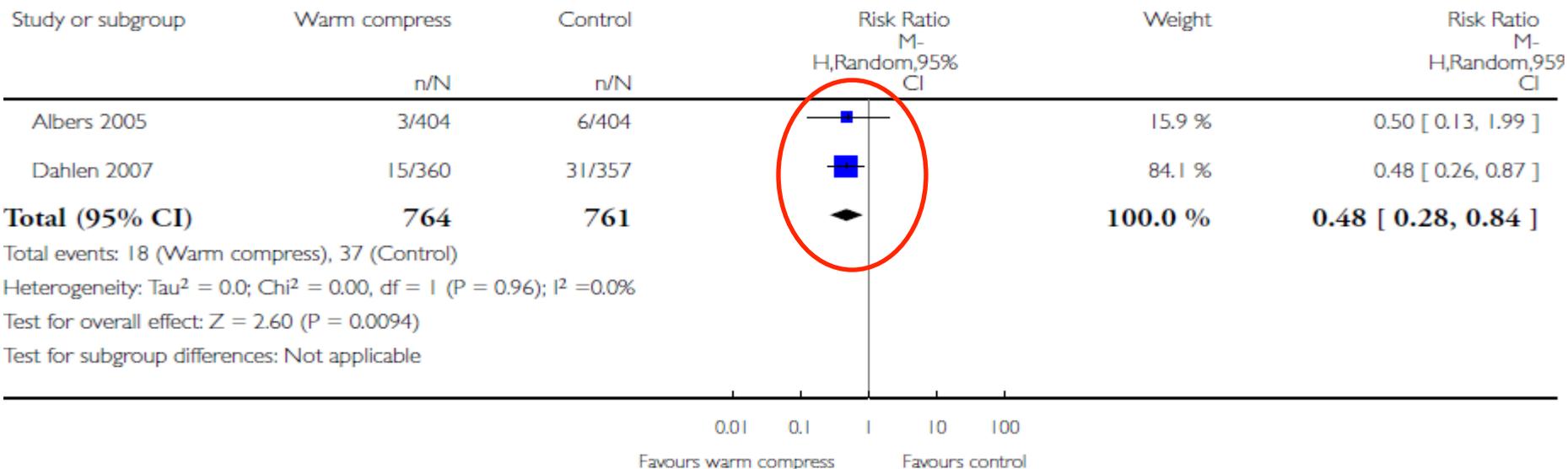
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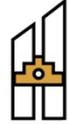
Comparison: 2 Warm compresses versus control (hands off or no warm compress)

Outcome: 1 3rd or 4th degree tears



Massage versus control

Two studies (Stamp 2001, Albers 2005)



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- Significant effect on third and fourth degree tears
- No effect on episiotomy
- No effect on intact perineum

Massage

3rd and 4th degree tears



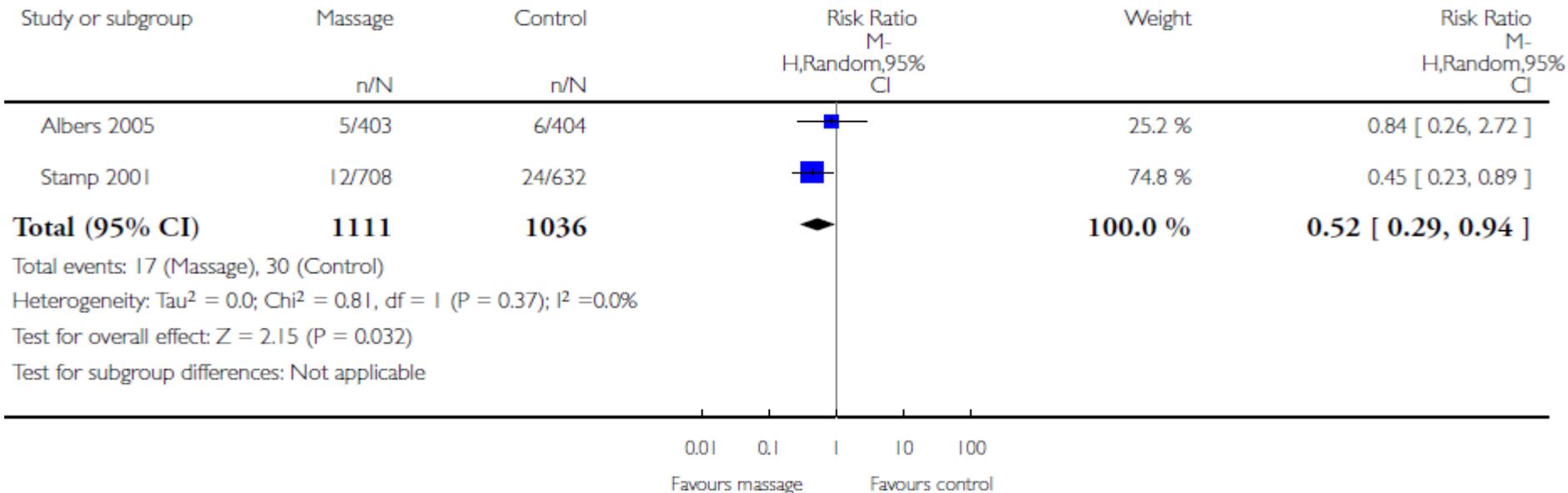
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Analysis 3.1. Comparison 3 Massage versus control (hands off or care as usual), Outcome 1 3rd or 4th degree tears.

Review: Perineal techniques during the second stage of labour for reducing perineal trauma

Comparison: 3 Massage versus control (hands off or care as usual)

Outcome: 1 3rd or 4th degree tears



Massage

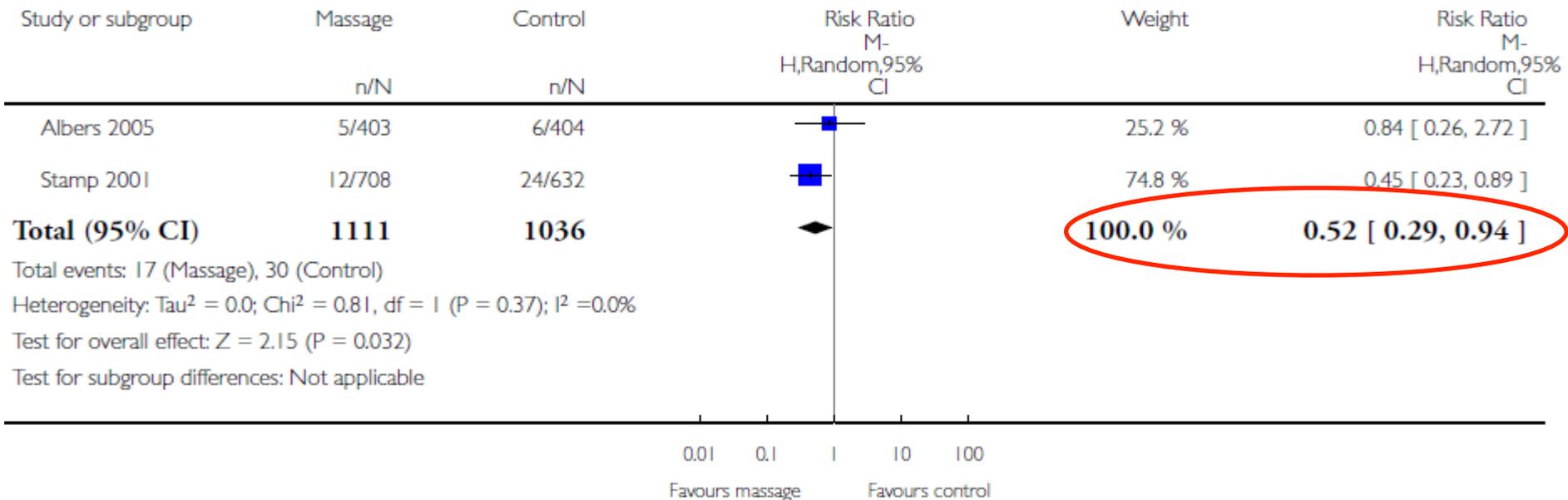
3rd and 4th degree tears

Analysis 3.1. Comparison 3 Massage versus control (hands off or care as usual), Outcome 1 3rd or 4th degree tears.

Review: Perineal techniques during the second stage of labour for reducing perineal trauma

Comparison: 3 Massage versus control (hands off or care as usual)

Outcome: 1 3rd or 4th degree tears



Massage

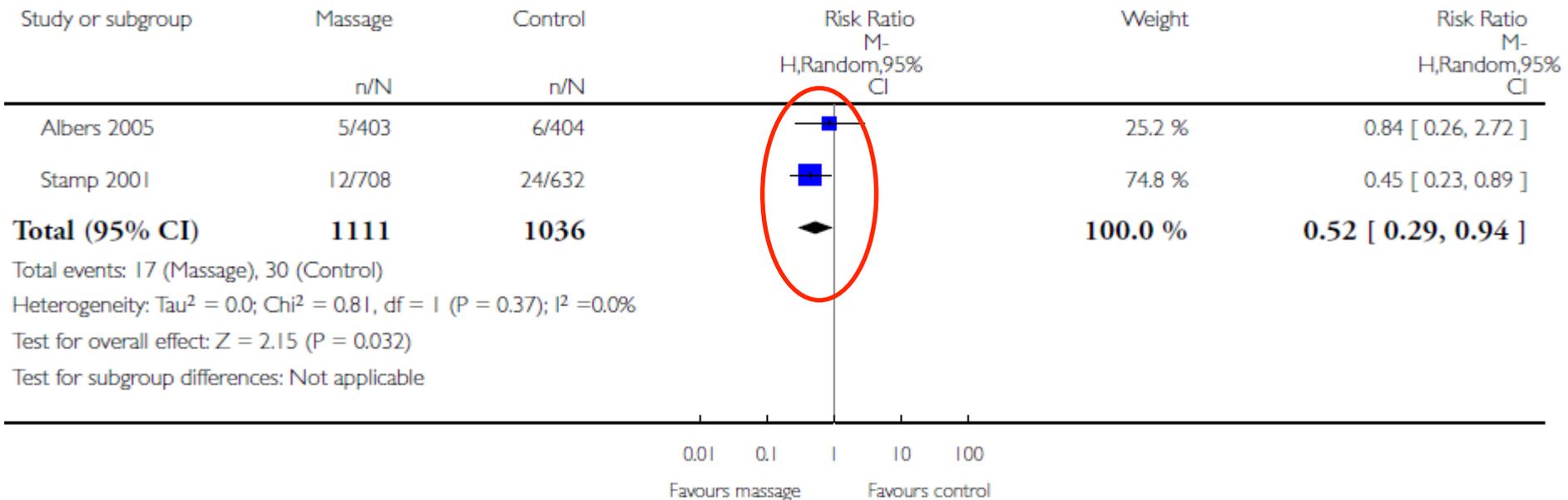
3rd and 4th degree tears

Analysis 3.1. Comparison 3 Massage versus control (hands off or care as usual), Outcome 1 3rd or 4th degree tears.

Review: Perineal techniques during the second stage of labour for reducing perineal trauma

Comparison: 3 Massage versus control (hands off or care as usual)

Outcome: 1 3rd or 4th degree tears



Ritgens manoeuvre vs standard care

1 study (Jönsson 2008)

No effect on third and fourth degree
tears

No effect on incidence of episiotomy

Ritgen's manoeuvre

3rd and 4th degree tears



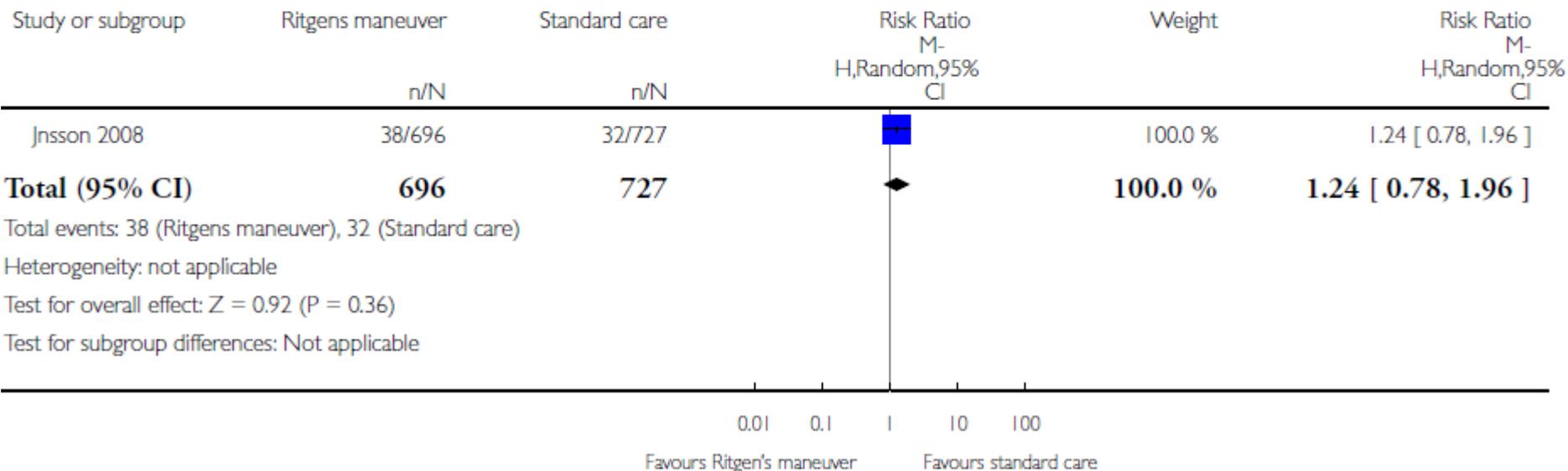
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Analysis 4.3. Comparison 4 Ritgen's manoeuvre versus standard care, Outcome 3 3rd or 4th degree tears.

Review: Perineal techniques during the second stage of labour for reducing perineal trauma

Comparison: 4 Ritgen's manoeuvre versus standard care

Outcome: 3 3rd or 4th degree tears



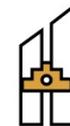
Conclusion / Implications for practice

The use of hot packs reduced severe perineal trauma.

It is easy to practice

It is cheap

It poses no harm

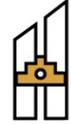


- More research is needed

[http://onlinelibrary.wiley.com/doi/
10.1002/14651858.CD006672.pub2](http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD006672.pub2)

Warm compresses

(Albers 2005)



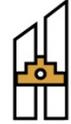
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‘Warm compresses were clean wash cloths made warm by immersion in tap water and squeezed to release excess water. They were held continuously to the mother’s perineum and external genitalia by the midwife’s gloved hand, during and between pushes, regardless of maternal position.

Compresses were changed as needed to maintain warmth and cleanliness.’

Warm packs

Dahlen (2007)

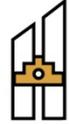


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“Women assigned to the warm pack group received usual care during labor until the baby’s head began to distend the perineum and the woman was aware of a stretching sensation. A sterile metal jug filled with boiled tap water (between 45° and 59°C) was used to soak a sterile perineal pad, which was wrung out before being placed gently on the perineum during contractions. The temperature range of the perineal pad over 15 minutes was 38° to 44°C. The pad was resoaked to maintain warmth between contractions.’

Perineal massage

(Stamp 2001)

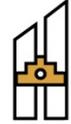


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'Women in the intervention group received massage and stretching of the perineum with each contraction during the second stage of labour. The midwife inserted two fingers inside the vagina and using a sweeping motion, gently stretched the perineum with water soluble lubricating jelly, stopping if it was uncomfortable for the woman'

Perineal massage

(Albers 2005)



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'Perineal massage with lubricant was gentle, slow massage with two fingers of the midwife's gloved hand, moving from side to side, just inside the patient's vagina. Mild, downward pressure (toward the rectum) was applied with steady, lateral strokes which lasted one second in each direction. This motion precluded rapid strokes or sustained pressure. A sterile, water-soluble lubricant was used to reduce friction with massage. Massage was continued during and between pushes, regardless of maternal position, and the amount of downward pressure dictated by the woman's response'