

Non-suturing or skin adhesives versus suturing of the perineal skin after childbirth: a systematic review

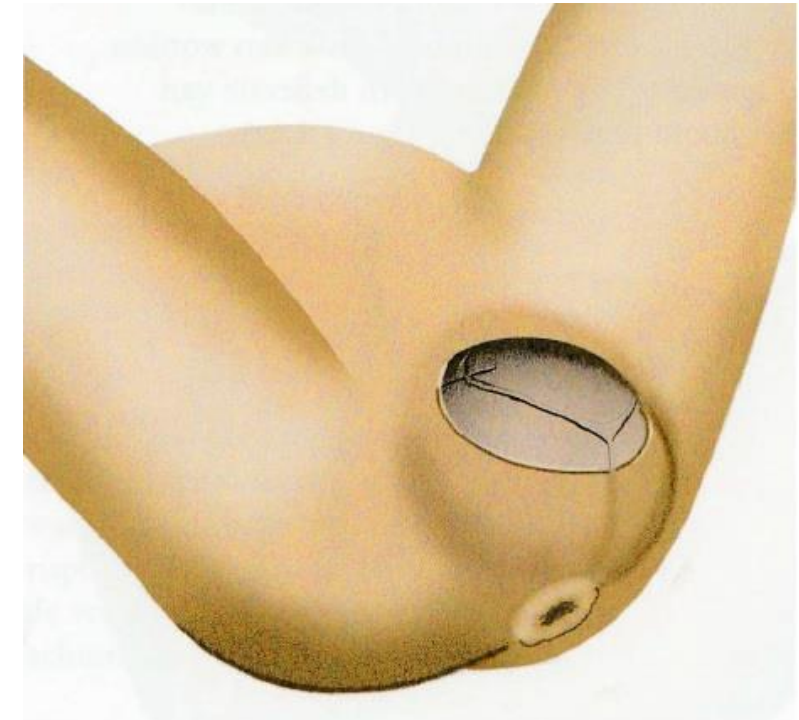
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Introduction

Suturing of perineal trauma after childbirth can cause problems such as pain, discomfort due to tight sutures, the need for suture removal and dyspareunia. It is unclear whether leaving the perineal skin unsutured or using skin adhesives might prevent these problems. The aim of this systematic review was to compare non-suturing of the perineal skin or the use of skin adhesives versus suturing of the skin when repairing a second degree perineal tear or episiotomy in terms of postpartum perineal pain, analgesic medication, skin separation, feeling of tight sutures, need for suture removal or resuturing, complications, complaints, mobilization and women's satisfaction.

Methods

CENTRAL, MEDLINE, EMBASE, CINAHL and prospective trial registers until January 2013 were searched for (quasi-)randomised controlled trials comparing non-suturing of the perineal skin or skin adhesives versus suturing of the skin when repairing a second degree perineal tear or episiotomy. Exclusion criteria were studies where the entire perineal wound was left unsutured and studies including women with a first degree tear only.

Results

Four randomised and two quasi-randomised controlled trials (involving 2,922 women) with heterogeneity in contexts, designs and methodological quality were included. Because of methodological heterogeneity and a high risk of bias in several domains and studies, we did not conduct a meta-analysis.

Non-suturing of the skin leads to less short- and long-term pain compared to suturing and an increased rate of skin separation. Skin adhesives lead to less short-term pain without an increased rate of skin separation. Non-suturing leads to fewer women experiencing a feeling of tight sutures, less need for suture removal, more women with (pain-free) resumed intercourse before three months and less women experiencing dyspareunia.

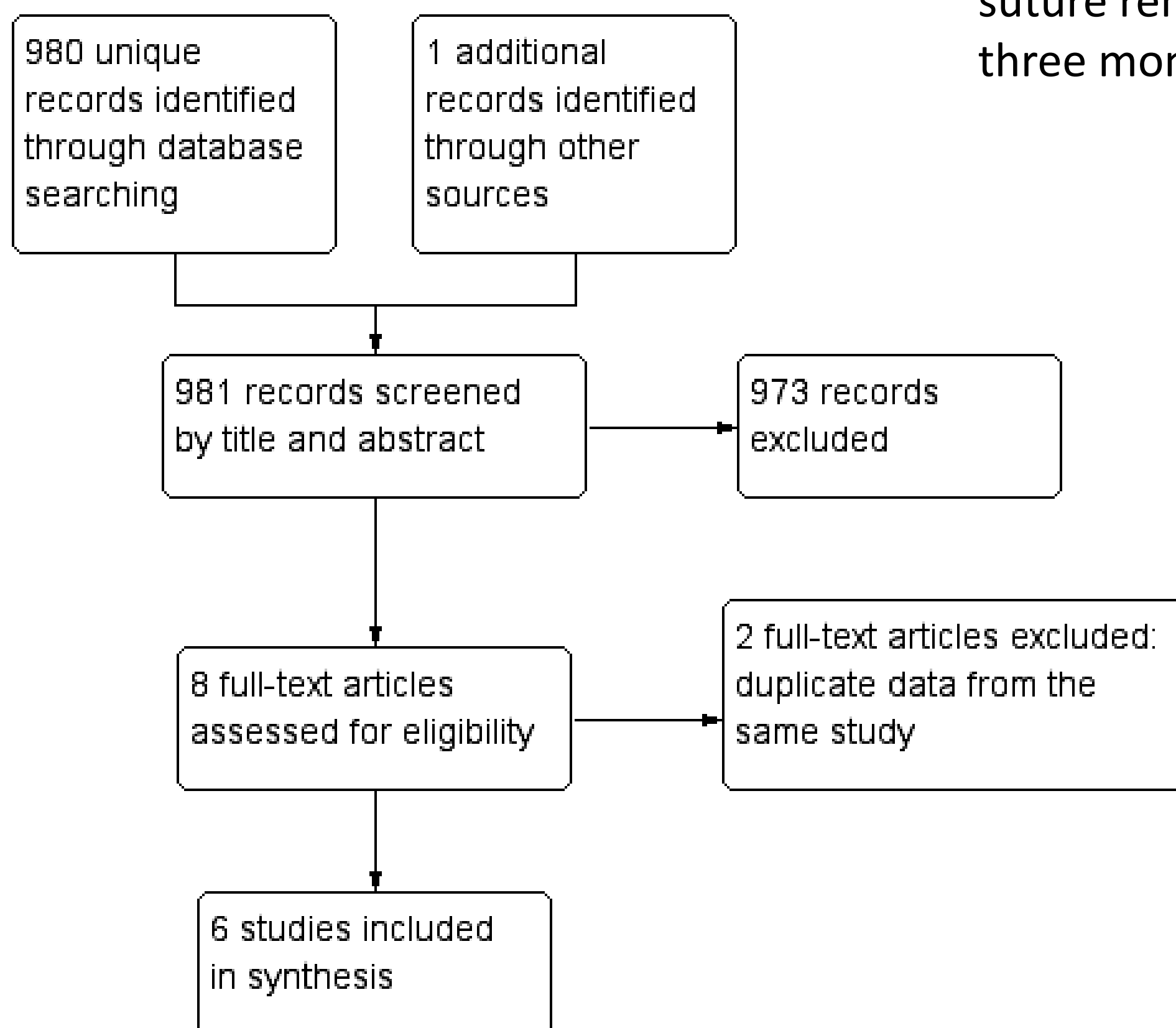


Table. Summary of risk of bias

	Gordon 1998	Oboro 2003	Adoni 1991	Bowen 2002	Morgan 2006	Mota 2009
Random sequence generation	Low risk	Low risk	High risk	High risk	Unclear risk	Low risk
Allocation concealment	Low risk	Low risk	High risk	High risk	Unclear risk	Low risk
Blinding of participants and personnel	High risk	High risk	High risk	High risk	High risk	High risk
Blinding of outcome assessment <14 days	High risk	High risk	Low risk	High risk	High risk	High risk
Blinding of outcome assessment >14 days	Low risk	Low risk	Not applicable	Low risk	High risk	High risk
Incomplete outcome data	Low risk	Low risk	Unclear risk	Unclear risk	Low risk	High risk
Selective reporting	Unclear risk	Unclear risk	High risk	Unclear risk	Low risk	Low risk
Other sources of bias	Low risk	High risk	Unclear risk	Unclear risk	High risk	Low risk

Low risk (teal), Unclear risk (orange), High risk (red), Not applicable (white)

Discussion and Conclusions

The results of our review must be interpreted carefully, because the number of included studies was low, the included studies had some limitations and the methodological quality of the studies varied. Non-suturing of the skin or the use of skin adhesives appears preferable in terms of pain. Non-suturing could lead to more short-term skin separation when no adhesives are used, but there is no evidence for the clinical importance of skin separation. There is a need for studies with a follow-up of at least six months, in which pain is measured homogeneously and for studies comparing the use of skin adhesives with non-suturing of the skin with the focus on long-term cosmetic results.