Local cooling for relieving pain from perineal trauma sustained during childbirth

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Authors' objectives

Background: Perineal trauma is common during childbirth and may be painful. Contemporary maternity practice includes offering women numerous forms of pain relief, including the local application of cooling treatments.

Objectives: To evaluate the effectiveness and side effects of localised cooling treatments compared with no treatment, other forms of cooling treatments and non-cooling treatments.

Search methods: We searched the Cochrane Pregnancy and Childbirth Group's Trials Register (10 January 2012), CINAHL (1982 to 10 January 2012), the Australian New Zealand Clinical Trials Register (10 January 2012) and contacted experts in the field.

Selection criteria: Published and unpublished randomised and quasi-randomised trials (RCTs) that compared localised cooling treatment applied to the perineum with no treatment or other treatments applied to relieve pain related to perineal trauma sustained during childbirth.

Data collection and analysis: At least two review authors independently assessed trials for inclusion, assessed trial quality and extracted data. A sub-set of data were double checked for accuracy. Analyses were performed on an intention-to-treat basis where data allowed. We sought additional information from the authors of three trials.

Main results: Ten published RCTs were included (involving 1825 women). Comparisons were local cooling treatments (ice packs, cold gel pads (with or without compression) or cold/iced baths) with no treatment, gel pads with compression, hamamelis water (witch hazel), pulsed electromagnetic energy (PET), hydrocortisone/pramoxine foam (Epifoam), oral paracetamol or warm baths. Ice packs provided improved pain relief 24 to 72 hours after birth compared with no treatment (risk ratio (RR) 0.61; 95% confidence interval (CI) 0.41 to 0.91; one study, n = 208). Women preferred the utility of the gel pads compared with ice packs or no treatment (RR 0.82; 95% CI 0.73, 0.92).

Differences detected in a composite of perineal oedema and bruising and overall wound healing were noted in one small study, favouring cold gel pads (n = 37) over ice (n = 35, mean difference (MD) 0.63 on a scale of 0 to 15; 95% CI 0.20 to 1.06) or no treatment (n = 39, MD -2.10; 95% CI -3.80 to -0.40) three to 14 days after giving birth. Women reported more pain (RR 5.60; 95% CI 2.35 to 13.33; one study, 100 women) and used more additional analgesia (RR 4.00; 95% CI 1.44 to 11.13; one study, 100 women) following the application of ice packs compared with PET.

Authors' conclusions: There is only limited evidence to support the effectiveness of local cooling treatments (ice packs, cold gel pads, cold/iced baths) applied to the perineum following childbirth to relieve pain.


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