



Fetal movement counting for assessment of fetal well-being: A draft systematic review

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IAMANEH Scholarship

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Presentation layout

- ◆ Definitions
- ◆ Background
- ◆ Objectives
- ◆ Selection criteria
- ◆ Search strategies
- ◆ Methods of review
- ◆ Summary of studies
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- ◆ Conclusion



Operational definition

- ◆ Routine Fetal movement counting: (FMC) done routinely to all women
- ◆ Selective fetal movement counting: Done to women considered to be at high risk by clinicians
- ◆ Various methods: According to when, how often and how long FM were counted
- ◆ Mixed or undefined: where trial authors did not state method or whether high or low risk



Background

- ◆ A goal to have live baby and happy mother
- ◆ Fetal movements decrease then disappear before the fetus dies (Cronje 1996)
- ◆ Stillbirths commonly occur in women with uncomplicated pregnancies (Grant 1989)
- ◆ Ante natal visits
- ◆ Unnecessary anxiety? Timely interventions?
- ◆ Is fetal movement counting necessary?



Objectives

To assess outcomes of pregnancy where fetal movement counting is done routinely, selectively or is not done at all

To compare different methods of fetal movement counting.



Selection criteria

◆ Types of studies

- Randomised controlled trials. Poorly randomised excluded

◆ Types of participants

- Women with viable fetuses

◆ Interventions

- Routine
- Selective surveillance

Mixed or undefined

Different types of counting

Other methods fetal



...selection criteria

◆ Outcomes measured

-**Maternal:** Satisfaction, anxiety, other psychological

-**Pregnancy:** Antenatal admissions, stillbirths, preterm deliveries, low birth weight, assisted deliveries, C/S, other fetal tests,

-**Neonatal:** Neonatal deaths, five-minute Apgar score < 7
Umbilical arterial pH < 7.2, Neonatal intensive care unit admission, Respiratory distress syndrome
Hypoxic ischaemic encephalopathy,



Search strategies

- ◆ PubMed and CENTRAL

Search words: fetus, fetal, movement and count or counting

- ◆ Search strategy developed for the Cochrane Pregnancy and Childbirth Group.



Methods of review

- ◆ Trials evaluated for quality
- ◆ Scores for allocation concealment (A, B, C, D)
- ◆ Scrutinised for intention to treat analysis and losses to follow up
- ◆ More info from trial authors, assistance from statisticians



...methods of review

- ◆ Data extracted, tables, Revman, accuracy, Revman analysis
- ◆ Cluster randomised: Donner 2001 & statisticians
- ◆ Dichotomous data: RR and 95% CI
Heterogeneity: Odds ratio and 95% CI
- ◆ Continuous data: Weighted mean difference and 95% CI,
- ◆ Could not do subgroup analysis

Summary of studies

Description

- ◆ 12 studies considered
- ◆ 3 studies included (Gomez 04, Freda 93, Thomsen 90)
- ◆ 6 studies excluded
- ◆ 3 awaiting more information

Methodological quality of included studies

All RCT, One: AC was A (Freda 1993)

Two studies: AC was B, (Gomez 2004) and (Thomsen 1990)

22% post enrolment exclusions in treatment and 24% in control (Thomsen 1990) No ITT, poor contribution from each



Results

One study compared FMC with hormone assessment

FMC: ↓ hospital visits (significant), A trend to ↑ C/S, A trend to ↑ insecurity

No significant differences in hospital admissions, stillbirths, Apgar scores, umbilical PH, growth retardation



....results

Two included studies measure compliance between two methods of FMC

↑ Compliance Cardiff, another study: Trend to ↑ compliance Cardiff, Overall: ↑ compliance

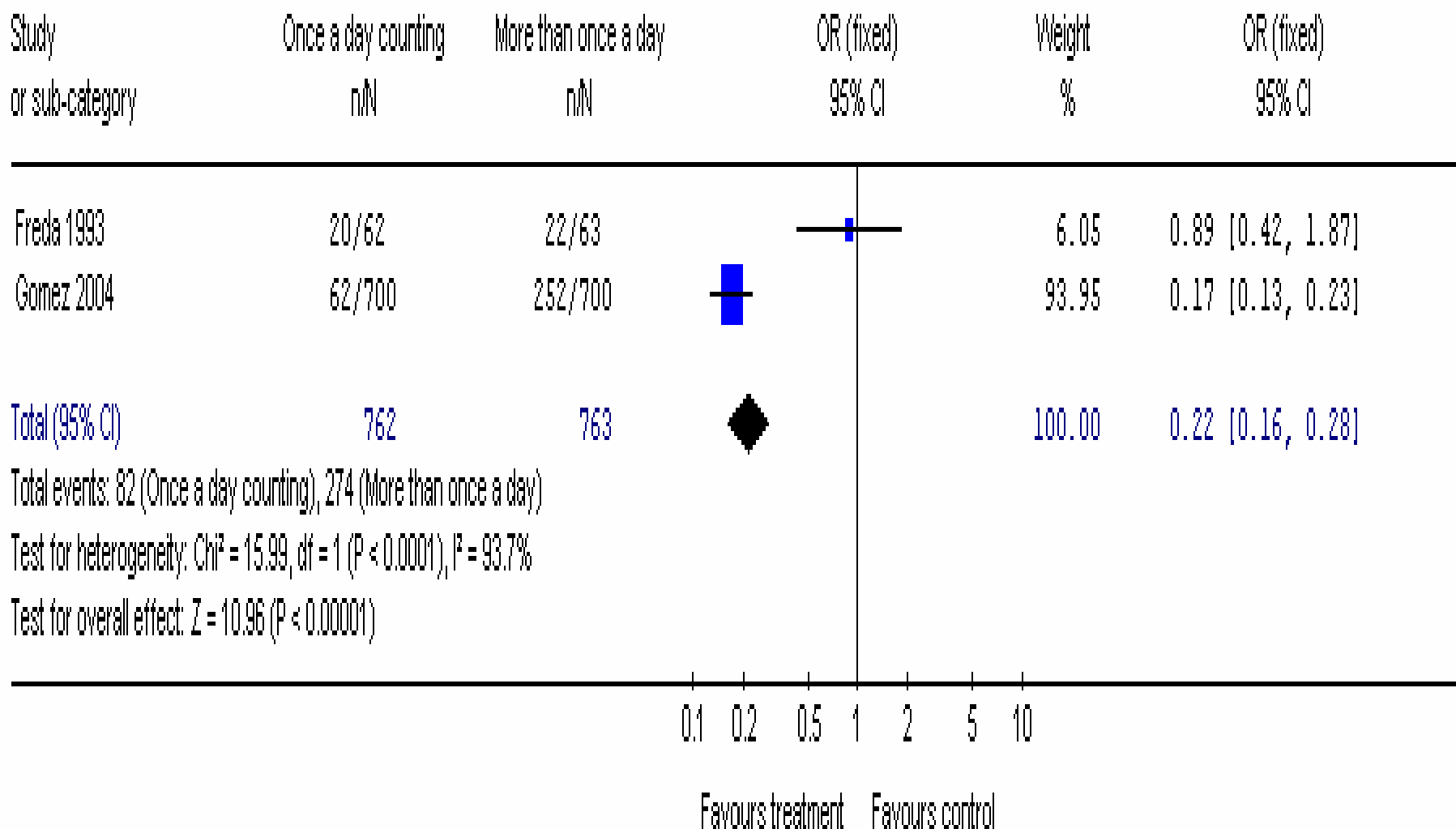
Excluded: Neldam 83, 13 women had ↓ FM before stillbirths, 9 in normal pregnancies;

Grant 82, 17 ↓ FM- No emergency delivery +/- false reassurance from diagnostic testing, esp CTG and clinical error

Review: Fetal movement counting for assessment of fetal well-being

Comparison: 06 Once a day fetal movement counting vs a more than once a day fetal movement counting method

Outcome: 02 Failure to comply





Discussion

- ◆ None addressed the main objectives, two of the included studies 12-15yrs old, 1 recent (Gomez 2004) measured only one outcome.
- ◆ Allocation concealment not satisfactory
- ◆ Total number from all 3 trials 2 716
- ◆ A possibility of contamination
- ◆ Possibility of Hawthortone effect
- ◆ FMC associated with no major complications



Conclusion

- ◆ Cannot draw firm conclusions

Studies few, participants few

A maximum of two studies contributed to a single outcome

- ◆ Robust research: benefits/ risks especially in low risk women
- ◆ No negative outcomes associate with FMC except for a trend to ↑ C/S, a trend to ↑ insecurity

"Batho pele"



Batho pele

Thank you