Selective versus routine use of episiotomy for vaginal birth

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Outline

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“Selective versus routine use of episiotomy for vaginal birth”

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Our research group


- **Dr. JIANG Hong** is the Associate Professor, Deputy Chair of the Department of Maternal, Child and Adolescent Health, School of Public Health, Fudan University, Shanghai, China.

- **Professor QIAN Xu** is a professor of Department of Maternal, Child and Adolescent Health, School of Public Health, and the founding director of Global Health Institute, Fudan University, Shanghai, China.

- **Professor Paul Garner** is a professor of Liverpool School of Tropical Medicine (LSTM), UK, responsible for the Centre for Evidence Synthesis for Global Health. He was part of the original team that set up the Cochrane Collaboration.
Overall research process

2013
Title registration

- To actively communicate with the editor and identify the topic
- Complete the title registration

2014 to 2015
Protocol approval

- Writing
- Peer review
- Revision
- Protocol approval

2016 to 2017
Review writing

- Writing
- Peer review
- Revision
- Publication
Research background

- Vaginal birth can cause tears to the vagina and perineum.

- Episiotomy is a surgical incision of the vagina and perineum carried out by a skilled birth attendant to enlarge the vaginal opening.

- Reported rates of episiotomies vary from as low as 9.7% (Sweden) to as high as 100% (Chinese Taipei).
Research Background

- Complications associated with episiotomy include bleeding, pain and discomfort of the wound and sutures (which may cause pain while sitting, and in turn affect breastfeeding), wound scarring, dyspareunia, or complications in subsequent vaginal births.

- Other adverse effects of episiotomy, e.g. unnecessary health expenditures, cost of human resource etc.
Research aim

• To assess the effects on mother and baby of a policy of selective episiotomy ('only if needed') compared with a policy of routine episiotomy ('part of routine management') for vaginal births.
Research methodology

Systematic review method adhere to Cochrane Review standards

Inclusion criteria:
- Randomized controlled trials (RCT).

Participants:
- Pregnant women having normal or assisted vaginal births.

Intervention:
- A policy of performing episiotomy only if needed ('selective', intervention group) versus routine episiotomy (control group).

Assessment of risk of bias in included studies:

1. Random sequence generation
2. Allocation concealment
3. Blinding of participants and personnel; Blinding of outcome assessment
4. Incomplete outcome data
5. Selective reporting (checking for reporting bias)
6. Other bias (checking for bias due to problems not covered by above points)

Overall bias
Research methodology

**Data synthesis**

- Meta-analysis
- random-effects when substantial statistical heterogeneity detected (greater than 50%)
- fixed-effect

**Assessment of the certainty of the evidence using the GRADE approach**

**Literature searching**

- Retrieved 49 reports, identified
  - 29 studies, of which 12 were included
  - 7 in developed countries
  - Canada, Germany, Ireland, Spain, and the UK.
  - 5 in low-mid income countries
  - Argentina, Columbia, Malaysia, Pakistan, and Saudi Arabia.

**Main outcomes**

- Severe perineal/vaginal trauma
- Blood loss at delivery
- Newborn Apgar score less than seven at five minutes
- Perineal infection
- Moderate or severe pain
- Long-term dyspareunia (at least six months after delivery)
- Long-term effects (defined as trauma at least six months after delivery, including urinary fistula, urinary incontinence, genital prolapse, rectal fistula, faecal incontinence and genital prolapse)
Research findings

A policy of selective episiotomy may result in 30% fewer women experiencing severe perineal/vaginal trauma (RR 0.70, 95% CI 0.52 to 0.94; 5375 women; eight RCTs; low-certainty evidence).
Research findings

- **Routine episiotomy** compared with the policy of **selective episiotomy**
- Increased risk of severe perineal/vaginal trauma;
- No clear difference on
  - Blood loss at delivery,
  - APGAR Score at 5 minutes,
  - Perineal infection,
  - Women with moderate or severe pain (measured by visual analogue scale),
  - Long-term dyspareunia (at least six months) and long-term urinary incontinence (at least six months)
Impact on future researches

◆ Few trials reported some of our key outcomes:
  ✓ low Apgar score at five minutes
  ✓ perineal infection
  ✓ perineal pain
  ✓ long term dyspareunia
  ✓ urinary incontinence
  ✓ any possible effect on breastfeeding

◆ Further cost-effectiveness analysis may help elucidate the extent of cost savings with selective episiotomy.

◆ The trials included in this review did not appear to consider women's preferences and views on these procedures and the outcomes important to them.

◆ Other remaining questions relate to relative effects with the type of episiotomy (midline or mediolateral, or different angles of episiotomy).
Research conclusion

- In women where no instrumental delivery is intended, selective episiotomy policies result in fewer women with severe perineal/vaginal trauma.
- The findings of the research have the potential of saving unnecessary health expenditures and reallocating resources to the area in most needs.
Application in guidelines

Used in 3 guidelines:

1. Royal College of Obstetricians & Gynecologists (2017)


Received high attention worldwide

https://cochrane.altmetric.com/details/16221476


- **Attention score** In the **top 5%** of all research
- **98th percentile of High Attention Score** compared to outputs of the same age
- **95th percentile of high attention Score** compared to outputs of the same age and source

**Summary**

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**Abstract**: Some clinicians believe that routine episiotomy, a surgical cut of the vagina and perineum, will prevent serious tears during childbirth. On the other hand, an episiotomy guarantees perineal trauma and sutures. To assess the effects on mother and baby of a policy of selective episiotomy (only if needed) compared with a policy of routine episiotomy (part of routine management) for vaginal births. We searched Cochrane Pregnancy and Childbirth’s Trials Register (14 September 2016) and reference lists of retrieved studies. Randomised controlled trials (RCTs) comparing selective versus routine use of episiotomy, irrespective of parity, setting or surgical type of episiotomy. We included trials where either unassisted or assisted vaginal births were intended. Quasi-RCTs, trials using a cross-over design or those published in abstract form only were not eligible for inclusion in this review. Two authors independently screened studies, extracted data, and assessed risk of bias. A third author mediated where there was no clear consensus. We observed mood reactions for data analysis and interpretation where trials were reviewed authors. We used...
Knowledge translation


- Being circulated in FIGO website (International Federation of Gynecology and Obstetrics)
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