Post partum sexual function; Does mode of delivery matter?

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Introduction

• “Healthy sexual function during pregnancy and after childbirth is one of the cornerstones for couples to evolve from partners to parents.”

• <10% of women will discuss antenatal fears about sex
• <30% of women given information on sex

• Common myths around sexual function during pregnancy
  – Fetal injury
  – Bleeding
  – Infection
  – Preterm labour

Serati M, J Sex Med 2010
Pregnancy sexual function facts

• 90% of women remain sexually active during pregnancy

• 30% of women are sexually active in 3\textsuperscript{rd} trimester
  – Decreased desire
  – Increased physical discomfort
  – Altered body image
  – Fears of injuring fetus/adverse pregnancy outcome
Female sexual dysfunction (FSD) occurs when a patient experiences disordered desire, arousal, orgasm, or pain and distress related to these symptoms.

- Prevalence of FSD at 2-3 months post partum is up to 83%
- <15% women disclosed postpartum sexual problems.
- Health care providers lack training
  - obtaining sexual history
  - poor knowledge regarding postpartum sexual changes

Postpartum sexual function facts

• Hormonal changes
  – Elevated prolactin
  – Decreased estrogen: vaginal atrophy symptoms
  – Decreased androgen: decreased desire/libido
  – Oxytocin release with breast feeding: positive mood effects

• Resumption of sexual activity
  – 6 weeks 52%\(^1\)
  – 3 months 78%\(^2\) - 95%\(^3\)
  – 6 months 94%\(^4\)
  – 12 months 95%\(^4\)

• Predictor of sexual activity resumption is sexual activity at 12 weeks gestation

1. Rogers et al J Midwifery Womens Health 2009
2. McDonald et al, BJOG 2015
3. Lurie, Arch Gynecol Obstet 2013
4. De Souza et al, BJOG 2015
What about mode of delivery?

• Maternal demand for elective caesarean section is rising.

• Myth: CS results in improved post partum and long term sexual function ???? Protection of the “love tunnel”

• Prospective data is lacking on how mode of delivery affects sexual function.

• Existing literature is inconclusive, retrospective, non validated questionnaires/tools

- N=82
- 5 groups:
  - Vaginal delivery +/- 1st degree tear
  - Vaginal delivery with episiotomy
  - Instrumental delivery
  - Emerg CS
  - Elect CS
- FSFI at 6, 12, 24 weeks post partum via phone consult
- Total FSFI – no difference across MOD
  - Improved over time
- Domain scores – Desire/arousal, lubrication, orgasm, satisfaction, pain
  - No difference across MOD
  - Improved over time
Existing evidence: Systematic Review

- 33 studies for MOD and sexual function: 21 prospective
- 15 studies with validated questionnaires

- 92% women experience perineal pain after VD
  - most resolved by 2 months

- 3 months: Decreased desire, orgasm and increased pain
  - improved by 6 months

- Risk factors for post partum FSD
  - Age, breastfeeding, depression, tiredness, body image
  - Worrying about falling pregnant
  - UTI
  - Sexual inactivity in first trimester.
Existing evidence: Systematic Review

• No clear evidence that CS is protective

• Operative vaginal delivery
  – short term pain <6 months

• Desire, Arousal, Orgasm, Satisfaction:
  – No MOD association
  – Decreased if episiotomy until 6 months

• 3rd degree tears decreased sexual activity
The effects of mode delivery on post partum sexual function: a prospective study
A De Souza, PL Dwyer, M Charity et al, BJOG 2015

• Primary objectives: to determine the effects of
  – Mode of delivery: CS, NVD, Forceps, Ventouse
  – Perineal trauma: spontaneous tears, episiotomy
  on sexual function at 6 and 12 months post partum

• Secondary objectives: to determine the effects
  – Breastfeeding
  – Post natal Depression
  on sexual function at 6 and 12 months post partum
METHODS

• Hypothesis: Sexual function is better following CS delivery
• Prospective cohort study
• Power calculation – difference in FSFI scores
• N = 440
• Recruitment July 2010 – Dec 2011
• Inclusion criteria:
  – Primagravid women
  – English literate
  – 1st or early 2nd Trimester
METHODS

• Female sexual function index (FSFI)
  – antenatal booking visit, 28w, 6m, 12m

• 2 additional questionnaires at 6m, 12m
  – Edinburgh postnatal depression score
  – Breastfeeding survey

• Demographic and Birthing outcome data from hospital database

• Follow up completed in May 2013
METHODS

• Longitudinal analysis

• Effect of mode of delivery
• Effect of perineal trauma

• Confounding variables
  – maternal age
  – maternal BMI
  – gestation at birth
  – neonatal birth weight
  – mode of infant feeding 6 and 12 months postpartum
  – Post natal depression at 6 and 12 months postpartum.
RESULTS

- 94% women sexually active 6/12
  - 95% at 12/12

- 90% breastfeeding on discharge
  - 39% at 6/12,
  - 33% at 12/12

- Possible Postnatal Depression
  - 24% at 6/12
  - 23% at 12/12
RESULTS

Mode of delivery

<table>
<thead>
<tr>
<th>Mode of delivery</th>
<th>NVD</th>
<th>Forceps</th>
<th>Ventouse</th>
<th>Caesarean Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>54</td>
<td>13</td>
<td>8</td>
<td>25</td>
</tr>
</tbody>
</table>

Perineal Trauma

<table>
<thead>
<tr>
<th>Perineal trauma</th>
<th>Intact</th>
<th>1st degree</th>
<th>2nd degree</th>
<th>3rd degree</th>
<th>4th degree</th>
<th>Episiotomy</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>27</td>
<td>6</td>
<td>14</td>
<td>3</td>
<td>0</td>
<td>50*</td>
</tr>
</tbody>
</table>

*28% Episiotomy in women with NVD
Overall Results

• Sexual function scores over time independent of mode of delivery
  – Pain is worse at 6 months post partum
  – Pain at 12 months is same as early pregnancy
  – Orgasm Improves between 6 and 12 months
  – Orgasm at 12 months is the same as early pregnancy
Results – Effects of Mode of delivery over time

• NO difference in total FSFI scores between CS and VD

• Pain at 6 months is greater for all delivery types except CS

• Pain is less at 6 months with CS compared to antenatally

• Pain decreases between 6 and 12 months for all women

• No difference between pain at 12 months and early pregnancy
Results – Effects of Any Perineal Injury over time

• Overall sexual function and domain scores were significantly affected
  – Desire, Arousal, Orgasm, Pain

• Impairment at 6 months

• Improvement between 6 and 12 months

• Back to baseline at 12 months except improved arousal
Results – Effect of Specific Injuries over time

• Intact perineum – improved arousal at 6/12

• 2\textsuperscript{nd} degree tears – improved arousal at 6/12

• Arousal scores
  – Arousal decreased in other types of injury.
  – Arousal improved between 6 and 12 months
  – Arousal at baseline in all perineal injury groups
Conclusions

• At 6 months, Dyspareunia is greater for all vaginal delivery types except CS

• At 6 months, overall sexual function is negatively affected by any type of perineal injury.

• At 12 months post partum - no difference between vaginal delivery and CS

• At 12 months postpartum - no difference between women with an intact perineum and those with perineal injury
Long term effects of MOD on sexual function

- Minimal data beyond 12 months

- 2 year data: Term Breech Trial Hannah et al (2004):
  - Comparing planned CS with vaginal breech delivery
  - NO difference

  - no difference in parous twins delivering discordantly

  - NO difference b/w CS and VD
  - NO difference b/w operative VD and NVD
  - Partner satisfaction better in CS only group: better pelvic floor strength
LONG TERM Existing evidence
Childbirth and Female Sexual Function Later in Life

- N=1094
- Mean age 56.
- 61% sexually active
- 82% post menopausal
- Controlled for age, race, partner status, general health, diabetes

- No association b/w parity OR Mode of delivery
  - No change to desire, sexual activity or satisfaction

- Operative vaginal delivery ONLY
  - Low sexual desire OR 1.38

- Vaginal birth vs Vag + CS
  - Better lubrication (OR 2.57) if sexually active
Minimizing dysparuenia post partum

• RCT Evidence for decreased perineal trauma
  – Hands off technique decreases trauma
    • (Hands on technique decreases pain at 10 days)
  – Warm compresses in labour
  – Rapid absorbable synthetic suture (eg Vicryl Rapide)

• No evidence for Pelvic floor exercises
  – However antenatal PFMT decreases urinary and anal incontinence

Assessment of postpartum FSD

• Assess sexual function with brief sexual function screening questionnaire
  – Are you sexually active?
  – If sexually active, are there any problems?
  – Do you have any pain?

• Determine whether dysfunction was present before pregnancy

• Assess for any mood disturbance

• Examine perineal repair if dyspareunia is present

• Assess for presence of urinary and anal incontinence
Management of post partum FSD

- Discuss changes in anatomy, physiology, and sexual function that commonly occur post partum.
- Encourage vaginal lubricants particularly in breastfeeding
- Consider topical estrogen replacement in women with lactational amenorrhea.
- Surgical revision of perineal scarring/granulation/poor wound healing.
- Referral for physiotherapy – massage, ultrasound, pelvic floor downttraining or dilators
Depression and Sexual function

- PND decreased sexual frequency and interest 12 weeks
- Decreased desire 6 months
- FSD persists even after resolution of depression
- SSRI/SNRI – affect sexual function in 95%
  - Desire 79%, Arousal 83%, Orgasm 45%
Conclusions

• Women can be reassured that sexual dysfunction is not uncommon at 6 months postpartum.

• At 12 months, sexual function is similar to early pregnancy.
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