## Birth by Design: Are Celebs Too Posh to push?

NEW YORK — Celebs - as usual on the leading edge — are rumored to be at the forefront of a growing movement among new moms: pre-scheduled, elective Caesarean Sections.









By Jennifer D'Angelo
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## Unintended benefits?



Dr Sylvia Lin BHB, MBCHB, MRANZCOG Research Fellow University of Otago



Prof Don Wilson MBChB, MD, FRCS, FRCOG, FRANZCOG, CU

Can pelvic floor dysfunction be prevented by caesarean section? Findings from the ProLong and other epidemiological studies.

Pelvic floor dysfunction (PFD) in women results in the combination of some or all of the following conditions: urinary incontinence (UI), faecal incontinence (FI) and pelvic organ prolapse (POP). It also influences sexual function.

It is a very common problem, with over 46 per cent of women having some form of major pelvic floor dysfunction and is of epidemic proportions in later life. Approximately 11 per cent of women undergo surgery for this condition during their lifetime, seven per cent for prolapse alone.<sup>2</sup> In the USA, POP is thought to lead to over 200 000 surgical operations a year, resulting in an annual expenditure of US\$1billion.3 Pelvic floor dysfunction surgery numbers are likely to increase substantially as the population

longitudinal study ProLong (PROlapse and incontinence LONG-term research study). This commenced in 1993–94 and involved the Universities of Otago, Birmingham and Aberdeen in the UK. This is the largest ongoing prospective study in this field and involves a cohort of nearly 8000 women of whom just under 50 per cent returned questionnaires at three months, six and 12 years after delivery. By Women were also examined at the 12-year follow up. 10 It is planned to carry out the 20-year follow up in 2014. In this article the 12-year results of the ProLong study will be presented and compared with other epidemiological studies, with particular emphasis on whether caesarean section is protective for subsequent PFD.

#### **Urinary incontinence**

At 12 years after delivery, urinary incontinence is very common, with just over 50 per cent of women having this complaint. Women who delivered exclusively by caesarean section were less likely to have UI in comparison to women who delivered vaginally, (vaginal delivery 55 per cent versus caesarean 40 per cent, OR 0.46:95 per cent CI 0.37–0.58), but not if they had a combination of caesarean and spontaneous vaginal births.<sup>10</sup>

A similar reduction is seen at 20 years after delivery in the Swedish National Survey of pelvic floor dysfunction, the SWEdish Pregnancy Obesity Pelvic floor (SWEPOP) study. This involved just over 5000 priminarous women who delivered in 1985–88 with no further births.

## ProLong: Longitudinal Study of Pelvic Floor Dysfunction and Childbirth



Universities of Otago, Aberdeen. and Birmingham Funded by: WellBeing of Women and University of Otago









- All deliveries within 12 months (1993-94)
- 7883 participated 3 months after index birth
- 3638 followed up 12 years after delivery

The prevalance of urinary incontinence 20 years after childbirth: a national cohort study in singleton primiparae after vaginal or Caesarean delivery

- Swedish Pregnancy, Obesity and Pelvic Floor (SWEPOP) Study linked Medical Birth Register data to a questionnaire about UI sent in 2008
- 5236 Singleton Primiparae who delivered in the period 1985-1988 with no further births

Gyhagen et al BOG 2012

# Role of Caesarean Section on Prevention of PFD – Summary of Evidence

### **Urinary Incontinence**

Partial protection but prevalence still high:

- ProLong 12 years after delivery
   VD 55% CS 40% (OR 0.46, 95%, CI 0.37-0.58)
- SwePOP 20 years after delivery Primipara
   VD 40% CS 29% (OR 1.67, 95% CI 1.45-1.91)
- No difference between elective and emergency Caesars

# Role of Caesarean Section on Prevention of PFD – Summary of Evidence

#### **Faecal Incontinence**

- No evidence of reduced likelihood of FI in ProLong Study with Caesar at 12 years after delivery
- Similar findings of lack of longterm effect on FI was noted in updated Cochrane Review with Caesar

### Forceps/Vacuum

 Risk of long term faecal incontinence is significantly higher after having had one or more forceps deliveries (OR 2.08 95% CI 1.53-2.85)

## Role of Caesarean Section on Prevention of PFD – Summary of Evidence

#### POP:

- Reduced risk of POP symptoms VD 14.8% CS 6.3% (OR 2.55, 95% CI 1.98-3.28)
- Reduced risk of objectively measured signs of prolapse
   VD 29% CS 5% (OR 0.11, 95%, CI 0.03-0.38)
- Reduced risk of POP surgery
   VD vs CS Hazard Ratio 9.2 (95%, CI 7-12)
   Forceps vs CS Hazard Ratio 20.9 (95%, CI 20.9, 95%, CI 5.5-79.9)

### Partial protection for POP and to a lesser degree UI

# Role of Elective Caesarean Section on Prevention of Pelvic Floor Dysfunction – Conclusion

- Controversial!
- Given the associated risks (especially multiple repeat Caesarean deliveries) it is unlikely that elective Caesarean Sections is an effective prevention strategy for most women
- A strategy of offering elective Caesarean Section to women who are at substantially higher than average risk of PFD may be a more appropriate and effective prevention strategy
- ?What risk threshold

## **Current Main Prevention Strategies**

- Caesarean Section and other delivery modes
- Pelvic floor muscle training
- Modifiable risk factors/lifestyle interventions



