

DELIVERY MODE IN NULLIPAROUS WOMEN AND POSTPARTUM URINARY INCONTINENCE: A NATIONAL MULTI-CENTER PROSPECTIVE COHORT STUDY IN MAINLAND CHINA

Hypothesis / aims of study

To obtain epidemiological data on the delivery mode in nulliparous women and its impact on the development of UI in mainland China.

Study design, materials and methods

The study was conducted to follow up 10418 nulliparous women since their early pregnancy from Sep 2007 to May 2009 in fourteen maternity units in seven regions. Modified Bristol Female Lower Urinary Tract Symptoms (IQ-BFLUTS) questionnaire was used to collect data on delivery mode in nulliparous women and to estimate prevalence rate of UI at six months postpartum.

Results

A full dataset was available for analysis in 10098 women. Delivery mode in Chinese nulliparous women was vaginal delivery 51% versus cesarean section (C-section) 49%. C-section rate was significantly higher in urban nulliparous women (54.9%) than in rural women (43%) ($P < 0.001$). Elective C-section rate was 27.5%, while 21.5% for emergency C-section. Elective C-section rate was significantly higher than emergency C-section rate both in urban and rural nulliparous women ($P < 0.001$).

Prevalence of UI at six months postpartum was 10.1% (522/5154) for vaginal delivery versus 3.3% (165/4944) for C-section ($P < 0.001$). No significant difference of postpartum UI prevalence rate was seen between elective C-section group and emergency C-section group in six-month follow-up ($P = 0.719$).

Multivariate Logistic Regression Analysis of delivery mode revealed that C-section was protective factor for SUI of nulliparous women at six months postpartum. No significant difference of postpartum SUI prevalence rate was seen between elective C-section group and emergency C-section group in six-month follow-up.

Interpretation of results

In our study, prevalence of UI was 26.7% in late pregnancy, 9.5% at six weeks and 6.8% at six months. Most cases were SUI (18.6%, 6.9% and 5.0% in late pregnancy and at six weeks and six months postpartum, respectively). A recent meta-analysis of international studies of postpartum UI found rough consistency across studies, that is, a mean incidence of any UI of 33% at three months postpartum. Our rates were much lower, perhaps because our population was composed primarily of young women (mean age, 26.4 ± 4.0 years).

One study, which similarly compared women in late pregnancy and at three months postpartum, found that postpartum UI increased for those with pre-pregnancy UI, pregnancy UI and greater pre-pregnancy BMI

Concluding message

C-section rate was nearly 50% in Chinese nulliparous women, which was higher in urban women than rural ones. Short term labor cause no risk of injury to pelvic floor. C-section is the protective factor for postpartum UI.

<i>Specify source of funding or grant</i>	The Eleventh Five-Year Plan for National Science and Technical Supporting Programs
<i>Is this a clinical trial?</i>	No
<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	Yes
<i>Specify Name of Ethics Committee</i>	Peking Union Medical College Hospital Ethics Committee
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	Yes