

## Impact of Delivery Types on Women's Postpartum Sexual Health

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**Objective** To investigate the impact of childbirth on the sexual health of primiparous women in China and the prevalence of women's postpartum sexual problems

**Method** In this cross-sectional study, obstetric records of 460 primiparous women delivering a live-birth at the First Affiliated Hospital of Chongqing University of Medical Sciences between November 1, 2000 and July 31, 2001 were analyzed together with the data collected from questionnaire survey conducted six months after delivery.

**Results** Totally 460 women participated in the questionnaire survey. Though 94.74% of the subjects had resumed sexual activity within six months after birth, most of them had experienced postpartum sexual problems, among which dyspareunia was the most common type. There was no significant association between delivery types and women's sexual health status in six months after birth, including their satisfactory degree of sexual intercourse, sexual desire, sex active rate, the incidence of dyspareunia and pubococcygeal muscle strength ( $P>0.05$ ). Only 20.80% of women had knowledge of sexual health and 8.02% of them had consulted for sexual problems.

**Conclusions** Women's postpartum sexual health problems were very common, they deserve more attention. There was no significant association between delivery types and women's postpartum sexual problems at the 6th month after delivery.

**Key words:** postpartum; sexual health; delivery types; health care

Postpartum sexual health is an important aspect of women's reproductive health<sup>[1]</sup>. Some studies indicated that though postpartum sexual problem was very common among Chinese women, it had long been neglected by women themselves and health service providers, which could partly be attributed to some traditional Chinese value and the lack of postpartum health knowledge. For instance, the caesarean section rate rose considerably, because some pregnant women chose caesarean section instead of vaginal delivery for fearing that the latter may damage their perineum<sup>[2]</sup>. In order to understand the condition of women's

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postpartum sexual health and its relationship with delivery types, as well as to investigate the condition of postpartum sexual health service, we conducted this cross-sectional study.

## Materials & Methods

A questionnaire survey was conducted among 460 primiparous women who delivered a live-birth at the First Affiliated Hospital of Chongqing University of Medical Sciences between November 1, 2000 and July 31, 2001.

Informations about each woman (age, occupation, address, medical history, obstetric details) and her infant (birth weight, gestational age) were collected from their obstetric records. The items in the questionnaire included four aspects:

**General information** including age, occupation, marital status, income, birth place, and resident place.

**Mental health status** including 12 questions on the relationship between subjects and their partners and the effect of negative traditional value, e.g., "Is sex important in life?", "Do you consult a doctor for problems with sexual intercourse? Why?", "Do you communicate with your husband how do you feel about sexual intercourse?", etc. The score of answers was 1~4 point(s), and total score < 15 was regarded as severely influenced by traditional value, 15~25 as moderately influenced, and > 25 as mildly influenced.

**Sexual health** including the duration of resuming intercourse after delivery, sexual problems (defined with DSM-IV-TR<sup>[3]</sup>) and the quality of sexual activity (the satisfactory degree on sexual intercourse, woman's sexual desire, woman's active rate, the incidence of dyspareunia and pubococcygeal muscle strength) before pregnancy and in 3 or 6 months after birth.

**Factors related to sexual health** including delivery types, recovery of perineal wound, breastfeeding, preventive exercise of pelvic floor muscle, etc..

The questionnaire had been modified twice.

Women were informed to come back for postpartum examination by a call or a mail in 6 months after delivery. They were asked about breastfeeding, menstruation, contraception, and sexual intercourse. Non-responders were informed once or twice more at two-week's interval.

Physical examination, especially pelvic examination, was carried out after the questionnaire survey was finished. We focused on the strength of pubococcygeal muscle (PC muscle), which is one of the most important cases among the pelvic floor muscles directly associated with sexual function. The strength of PC muscle is divided into three grades: grade 1, two fingers in the vagina did not feel pressure during pelvic floor muscle contraction and relaxation; grade 2, the fingers felt some pressure during contraction, but no pressure during relaxation; grade 3 is that the fingers were not pressed at all.

Data were processed by Epi Info 6.0, and then analyzed by SAS 6.12. The proportions

were compared by  $\chi^2$  test and Fisher's exact test.

## **Results**

### **The response rate**

Of the 753 women surveyed, 460 (61.09%) returned and finished the questionnaire. Sixteen subjects among 293 lost follow-up claimed by telephone calls that follow up was not needed by them. There were no differences between responders and non-responders in obstetric feature (data not shown).

### **Resumption of sexual intercourse**

Among all subjects, 456 subjects reported the time of resuming sexual activity, among whom 238 subjects (52.19%) had resumed sexual activity in 2 months after delivery, and the number rose to 432 (94.74%) in 6 months. The average duration for resuming sex activity was 8 weeks after delivery.

### **Problems with sexual intercourse**

In a year before pregnancy, 7.17% of the women (33/460) reported that they had experienced sexual problems. The rate was 70.59% during the first 3 months after delivery, 55.63% between 3 to 6 months of postpartum and 34.17% in the 6th month of postpartum. Compared to a year before pregnancy, problems such as pain, lack of vaginal lubrication, and loss of sexual desire increased significantly in the first 3 months after delivery, and then declined by the 6th month, but not reduced to the pre-pregnancy levels. Dyspareunia was the most common sexual problems.

### **Postpartum sexual health and delivery types**

Among women with different delivery types (spontaneous vaginal delivery, assisted vaginal delivery, and caesarean section) there were no significant difference for the satisfactory degree of sexual intercourse, woman's sexual desire, woman's active rate, the incidence of dyspareunia, and the strength of a pubococcygeal muscle ( $P>0.05$ ) (Table 1).

### **Health service and postpartum sexual health**

A proportion of 82.26 % (383/460) of the subjects were told to attend postpartum physical examination in 6th week after delivery, 98.04% (451/460) of the subjects had knowledge of resuming sexual activity and posit IUD in the appropriate time, and only 3 women (3/460, 0.65%) had knowledge of the possible sexual problems after delivery.

A 53.26 % (245/460) of the female subjects participated in postpartum physical examination on about 42 days after delivery and 94.29% of them had an examination of the vagina and the wound on the perineum or abdominal wall. The proportion of health professional discussed with these women on topics are: infant feeding (79.18%), time for resuming sexual activity (75.51%), contraception (65.31%), and some possible changes and problems they might experience in sexual life (20.82%).

Of the 237 subjects who had a postpartum sexual problem, only 19 subjects reported

**Table 1 Satisfactory degree, sexual desire, rate of female sex active, dyspareunia, strength of PC muscle and different delivery types at 6 months after delivery**

Item	SVD ( <i>n</i> =151)	AVD ( <i>n</i> =25)	CS ( <i>n</i> =284)	$\chi^2$	<i>P</i>
No.of subjects satisfying with sex life (%)	91 (60.26)	13 (52.00)	184 (64.79)	2.133	0.344
No.of subjects with decreased sexual desire (%)	66 (43.71)	10 (40.00)	112 (39.44)	0.686	0.752
No.of female sex active (times 110 sex coitus)					
$\geq 5$ months (%)	45 (29.80)	6 (24.00)	75 (26.41)	2.165	0.706
1~4 months (%)	57 (37.75)	8 (32.00)	117 (41.20)		
0 (%)	49 (32.45)	11 (44.00)	92 (32.39)		
No.of subjects with dyspareunia in sex life (%)	60 (39.74)	12 (48.00)	105 (36.97)	0.514	1.330
Strength of PC muscle					
No.of grade 1 (%)	60 (39.74)	8 (32.00)	85 (29.93)	4.585	0.333
No.of grade 2 (%)	47 (31.13)	10 (40.00)	105 (36.97)		
No.of grade 3 (%)	44 (29.14)	7 (28.00)	94 (33.10)		

SVD: spontaneous vaginal delivery AVD: assisted vaginal delivery CS: caesarean section

ever discussing it with a health professional. The reasons why the vast majority did not discuss their problems with a health professional were: 1) they thought that sex was private issue and were shy to ask for help; 2) they did not consider it a disease and should go to hospital because they could deal with it by themselves; 3) they did not have time to go to clinic; (4) they did not think it useful to ask for doctors; (5) others, such as poor finance, not knowing where to obtain help.

## Discussion

In this study, 460 primiparous women were chosen and inquired in order to avoid the influence of parturition history. Both interview and questionnaire were used in this study by health professionals. When sexual problem was found, advices, suggestions and even treatments were given. Therefore, data collected by the interview and questionnaire were more valid than those by postal questionnaire [5].

### Prevalence of sexual problems

It was reported that the prevalence rate of sexual problems was 1~38% before pregnancy [4,6], while it rose to 49~83% [4-6,9] after delivery. In this study, only 7.17% of the women had sexual problems in a year before pregnancy, while in the first three months after delivery, the proportion rose to 70.5%, and then the rate gradually declined at the 6th month after delivery. Among the women, dyspareunia and lack of vaginal lubrication were most common, as was indicated in previous studies [5,6,10-12]. The result indicated that the sexual problems after delivery are quite common and the tendency of all postpartum sexual problems was very consistent: extremely high in the first 3 months after delivery, then declined but did not resume pre-pregnancy levels. Barrett's results were similar to ours [6].

The high prevalence rate of women's sexual problems after delivery will have reverse

effect on the quality of sexual activity. However, it is not commonly seen in clinic due to both women's wrong ideas on sex and health professionals' lack of knowledge on sex [5,6,13]. It suggests that potentially high levels of unmet need of health care after delivery have not been addressed by postpartum care services so far.

#### **Association between delivery types and quality of sex life**

In recent years, the rate of elective caesarean section has risen. It was reported that the rate of caesarean section was about 40% in most hospitals in China, and the rate reached as high as 60% in some hospitals [14]. The reason why a woman insisted on elective caesarean section in a delivery without necessary surgery indication may be that she was under the influence of social psychology [15]. In this study, 28.57% of the subjects believed that vagina would not be expanded after caesarean section as it did after vaginal delivery, which will reduce the enjoyment of sexual intercourse. The fact also indicated that some women had taken into consideration for the impact of different delivery types on the quality of sexual activity after birth [2,6].

It has been reported that there was a positive association between the levels of dyspareunia/perineal pain and perineal damages and assisted vaginal delivery [7,8,10]. Macarthur, et al. [8] described an association between perineal problems and forceps delivery, and a protective effect of caesarean section, but there was no information about its effect on intercourse. Brown, et al. [7] reported that assisted vaginal delivery (forceps or ventouse extraction) was associated with high incidence of sexual problems after birth. They found that women who had assisted vaginal births were significantly more likely to experience perineal pain, incontinence and sexual problems than women who had spontaneous vaginal births, while those with caesarean section experienced the lowest rate of sexual problems. Therefore, They proposed that the caesarean section be used as a method to avoid perineal damage and improve the quality of sexual activity. Such evidence is relevant to the debate on women's choice of elective caesarean section as preferred delivery types, which has also aroused great disputes [6,9,11].

Among these subjects with different delivery types (spontaneous vaginal delivery, assisted vaginal delivery, and caesarean section), we found no significant difference in the quality of sexual life, the satisfactory degree of sexual intercourse, women's sexual desire, women's active rate, the incidence of dyspareunia, and the strength of a pubococcygeal muscle between them in the 6th month after delivery. Barrett, et al. [6] found similar results. They found that dyspareunia in the first 3 months postpartum was associated with vaginal delivery and history of dyspareunia before pregnancy. In the 6th month, dyspareunia was not associated with delivery types, but only with history of dyspareunia before pregnancy and breastfeeding. Bex, et al. [11] reported that the prevalence of dyspareunia was significantly different in the first 3 month postpartum and pre-pregnancy. In the 12th month after birth, all women recovered, except that 17% of women with episiotomy still had dyspareunia. Our

result suggests that the quality of postpartum sexual activity was not related to the delivery types.

The quality of sexual life is determined not only by vaginal tract pressure, but also by many other factors, such as social influence and psychological factors. The traditional value on abstinence, inappropriate sex education, pain and bleeding in labor, and fear of sexual injury and being pregnant again, are all closely related to the quality of postpartum sex life. Encouraging communication, trust and respect for each other within the couples are important for improving quality of sex life. Since the quality of sexual life in the 6th months after caesarean section is similar to that of vaginal delivery, women without surgery indication of caesarean section should not be encouraged to choose it for better postpartum sexual life.

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