

Clinical Significance of Pregnancy in Japanese Women Aged 15 Years

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Early childbearing has been recognized to increase the risks for both mothers and their infants, especially in low- and middle-income countries [1-4]. Although we believe that Japan is not a low- or middle-income country, there are some morbid pregnant women who are impoverished economically [5]. In this study, we examined the clinical characteristics and obstetric outcomes in pregnancies in Japanese women aged 15 years, because the minimum age to be married and recognized as adult in Japan is 16 years old.

There were 56 women aged 15 years at delivery at ≥ 22 weeks' gestation between 2002 and 2016 at our institute. In this study, the items recorded as maternal characteristics were as follows: timing of start of prenatal care, history of previous pregnancy, smoking, economic problems and unknown pregnant partner. The items recorded as maternal complications were as follows: infections (Chlamydia trachomatis and condyloma acuminatum), mental disorders, hypertensive disorders, glucose intolerance, and placental abruption. The items recorded as obstetric outcomes were as follows: preterm delivery, delivery modes, hypertensive disorders, low-birth-weight infant, neonatal asphyxia, and postpartum hemorrhage $\geq 1,000$ mL. Of the 56 women, seven (13%) gave birth without visiting prenatal care. Thus, we also examined the clinical significance of the women without visiting prenatal care in comparison with the women with prenatal visit using the same items.

Table 1 shows the clinical characteristics and obstetric outcomes in the study populations. In this study, adverse obstetric outcomes were not observed in the pregnancies in women aged 15 years; however various social and economic problems regarding pregnancy in these women were observed. In addition, the rate of more serious social problems such as insulted state with their parents and unknown pregnant partners was higher significantly in women without prenatal care than that in women received prenatal care.

In Japan, when single adolescent women give birth, the grandparents have legal parental authority over the infant. Therefore, the relationship between women and their parents is very important for both pregnancy and child care in adolescent women. In the cases, the relationship may be strained.

In this study, the incidences of Chlamydia trachomatis and condyloma acuminatum in the pregnant women aged 15 years seemed to be high. The high prevalence rate of these sexually transmitted diseases (STD) in young Japanese pregnant women is mostly in agreement with our previous observations [6, 7]. Because, some studies have reported age-based estimates, with younger participants showing higher prevalence estimates than older participants associated with cervical biological immaturity [8]. In addition, these are consistent with sexual behavior data, which show that numbers of sexual partners are highest in these younger age groups. This may constitute an additional social problem in adolescent women in Japan [9].

In this study, the frequency of smoking in the pregnant women aged 15 years was 30%. In Japan, the rate of smoking experience in women aged 15 - 16 years was reported to be 16-20% in 2004 [10]. The high rate had been suggested to be associated with the motive of "curiosity" and "interest". Such "curiosity" and "interest" might also lead to their sexual encounters and pregnancies. It is very important for young people to have "curiosity" and "interest"; however, re-enlightenment about the hazards of smoking, use of contraception, and STD prevention of young Japanese people is necessary.

In conclusion, pregnancy in women aged 15 years was not associated with adverse obstetric outcomes. However, it is associated with serious social and economic problems. Adequate social support is needed for young pregnant women.

Conflict of Interest

The author has declared that no competing interest exists.

References

1. Fleming N, O'Driscoll T, Becker G, Spitzer RF. Adolescent pregnancy guidelines. *J Obstet Gynaecol Can.* 2015;37(8):740-756.
2. Black AY, Fleming NA, Rome ES. Pregnancy in adolescents. *Adolesc Med State Art Rev.* 2012;23(1):123-138, xi.
3. World Health Organization: Adolescent pregnancy (Updated September 2014). <http://www.who.int/mediacentre/factsheets/fs364/en/> (June 19, 2017).
4. Broecker AED, Hillard PJA. Pregnancy in Adolescence. *The Global Library of Women's Medicine.* <http://www.glowm.com/> (June 19, 2017).

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Table 1. Clinical Characteristics and Obstetric Outcomes in Japanese Women Aged 15 Years With and Without Prenatal Care

Prenatal care	Total number	%	Yes number	%	None number	%
Total	56		49	88	7	13
Start of prenatal care						
First trimester	13	23	13	27	-	-
Second trimester	17	30	17	35	-	-
Third trimester	19	34	19	39	-	-
No prenatal care	7	13	-	-	7	100
History of previous pregnancy	1	2	1	2	0	0
History of smoking	17	30	15	31	2	29
Insulated state with parents	9	16	2	4	7	100*
Economic problems	13	23	6	12	7	100*
Unknown pregnant partner	19	34	13	27	6	86*
Chlamydia trachomatis antigen-positive	17	30	15	31	2	29
Condyloma acuminatum	7	13	7	14	0	0
Mental disorders	1	2	1	2	0	0
Hypertensive disorders	1	2	1	2	0	0
Glucose intolerance	0	0	0	0	0	0
Placental abruption	0	0	0	0	0	0
Preterm delivery	1	2	1	2	0	0
Spontaneous delivery	49	88	42	86	7	100
Vacuumextraction/forceps delivery	7	13	7	14	0	0
Breech delivery	0	0	0	0	0	0
Planned cesarean delivery	0	0	0	0	0	0
Emergent cesarean delivery	0	0	0	0	0	0
Low birth weight infant	0	0	0	0	0	0
Neonatal asphyxia	2	4	2	4	0	0
Perinatal death	1	2	1	2	0	0
Postpartum hemorrhage \geq 1,000 mL	4	7	4	8	0	0

Data are presented as number or percentage. *P < 0.05.

- Hiraizumi Y, Suzuki S. The hospitalization assistance policy system in Japan. *J Nippon Med Sch.* 2011;78(4):267-269.
- Suzuki S, Sekizawa A, Tanaka M, Matsuda H, Okai T, Kinoshita K, Kitamura T. Current status of condylomata acuminata in pregnant Japanese women. *Jpn J Infect Dis.* 2016;69(4):347-349.
- Suzuki S, Tanaka M, Sekizawa A, Kinoshita K. Distribution of chlamydia trachomatis infection determined by nucleic acid amplification tests in pregnant women in Japan. *Jpn J Infect Dis.* 2016;69(2):158-159.
- Moscicki AB, Winkler B, Irwin CE, Jr., Schachter J. Differences in biologic maturation, sexual behavior, and sexually transmitted disease between adolescents with and without cervical intraepithelial neoplasia. *J Pediatr.* 1989;115(3):487-493.
- Smith AM, Rissel CE, Richters J, Grulich AE, de Visser RO. Sex in Australia: the rationale and methods of the Australian Study of Health and Relationships. *Aust N Z J Public Health.* 2003;27(2):106-117.
- Suzuki S, Hiraizumi Y, Miyake H, Miura A, Yamane T. Obstetric outcomes of primiparous pregnant women aged \leq 16 years old (in Japanese). *Perinat Med (Tokyo).* 2011;41(12):1637-1641