

学位論文題目

Examination of better prenatal genetic counseling for pregnant women with negative emotions after taking non-invasive prenatal testing (NIPT)

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Pregnancy and childbirth are one of the major life events for women. Some pregnant women may experience unexpected events, such as pregnancy complications and the finding of fetal disease. Therefore, maternity checkups are recommended, yet a prenatal genetic test for congenital fetal diseases is carried out only at the request of pregnant women and partners. Prenatal genetic tests include fetal ultrasonography, chromosome analysis [amniocentesis, chorionic villus sampling, maternal serum marker test, combined test, non-invasive prenatal testing (NIPT)], and other related tests. For appropriately choosing the prenatal tests based on the characteristics and accuracy of each test, pre-test genetic counseling is required for accurate understanding of these tests.

In the United States and the United Kingdom, prenatal testing information is provided uniformly to all pregnant women. On the other hand, in Japan, "Opinions on Maternal Serum Marker Testing" by the Health Science Council of Japan in 1999 stated that the medical staff was not required to actively inform pregnant women of prenatal genetic testing. This ethos of the opinion was reflected to the opinions for prenatal genetic tests by the Japan Society of Obstetrics and Gynecology. For these circumstances, pregnant women and partners have to search for the accurate information of prenatal test by themselves, if they want to know. However, the accuracy of information on the Internet varies. Also, the impression of the first information may persist. If the initial information is inaccurate, it will be difficult to correct the impression even with proper genetic counseling. Because some pregnant women are unaware of the existence of prenatal genetic tests and do not understand its significance, providing accurate information in the early stage of pregnancy should be a psychosocial support for pregnant women and their partners.

In the Department of Obstetrics and Gynecology, Showa University Hospital, to which the author belongs, all pregnant women are provided with written information of prenatal genetic testing in the early stage of their pregnancy, and prenatal genetic counseling is required to those who wish to take the prenatal genetic test. Therefore, we investigated the effects of providing information on prenatal women's choices for prenatal tests. The results showed that the examination rate of all prenatal genetic tests based on the number of deliveries in 2018(1,118 deliveries) was 36.4%, which was higher than that of the previous national survey (7.2%) by Sasaki et al. The methods and systems of providing information may differ at other facilities. Moreover, we suggested that the difference in providing information should influence the examination rate. On the other hand, because more than half of the pregnant women did not undergo testing, providing information did not always promote testing behavior.

To deepen the understanding of the results above, we investigated psychological aspects before and

after genetic counseling about NIPT. This study was subjected to pregnant women and partners who wanted to take NIPT and visited the Department of Obstetrics and Gynecology at Showa University Hospital for the first time. The pregnant women and the partners had undergone maternity medical examinations at a different hospital, which were considered to have little information provided in advance compared to our hospital. In this study, stress and anxiety decreased significantly after genetic counseling in both the pregnant women group and the partner group, and the sense of security increased. The same results were obtained in the previous study by Shirato et al. In addition, the stress score before genetic counseling was significantly higher in the pregnant women group than in the partner group. The increasing level of reassurance after genetic counseling was, however, significantly higher in the partner group than in the pregnant women group. A previous study reported that pregnant women sometimes continuously keep anxiety until obtaining the test results, hence reassurance after genetic counseling did not apparently increase. On the other hand, the partner group was not active in collecting information about prenatal genetic tests, and the partner group tends not to have solid reality in the pregnancy. Therefore, information provided in genetic counseling tends to lead the partner group to reality and a reassurance.

In this study, some women got more stressed and anxious after genetic counseling. Finally, we conducted a questionnaire survey one year after genetic counseling to 526 women who had a negative NIPT result. Excluding 7 non-conforming women, 35 women had negative emotions (negative emotion group: 6.7%). The control group was 484 women. The women in a negative emotion group felt significantly more stress and anxiety before the tests. However, many women in the negative emotion group also thought that genetic counseling was necessary and should be taken before the test. This clarified the importance of genetic counseling.

From these studies, I found that the pregnant women and their partners made decisions autonomously, even in the possession of information on prenatal genetic testing, including maternal NIPT, regardless of her age. It was also revealed that many pregnant women and partners have reduced stress and anxiety and increased their reassurance through genetic counseling. Some pregnant women had negative emotions about prenatal genetic tests even if the test result was negative. Therefore, it is important to provide pregnant women and partners with accurate information on prenatal genetic testing from the earliest possible stage of pregnancy and to thoroughly provide genetic counseling to the pregnant women who want prenatal tests. By providing such information, autonomous decision-making will be possible without being swayed by some inaccurate information on the Internet, and regrets for taking the examination will be less likely to remain. Therefore, during genetic counseling, it is important to actively listen to the anxiety of pregnant women and partners and to empathize with them. Furthermore, preparing an environment where they feel free to consult after the test would alleviate negative emotions in pregnant women.