

Emotional Condition of Pregnant Women in the Course of Amniocentesis

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Abstract

The emotional condition of 46 pregnant women in the course of amniocentesis was studied. A day before the sampling of amniotic fluid, several hours after the intervention and one to three weeks after notification of the results of the procedure, the women received questionnaires aiming at a subjective evaluation of their emotional condition. In addition, they were engaged in a structured conversation which focussed on the identification of possible sources of anxiety connected with prenatal diagnostics.

All the characteristics of emotional condition studied in the given time exhibited a statistically significant change in a positive sense.

Some women, especially those who previously delivered an afflicted child, who had several spontaneous abortions in personal history and/or actual health complications, passed with difficulties above all through the waiting period. The women not having a burdened reproductive history with mostly an age indication for the test and one or more healthy children feared especially a damage or loss of the fetus during the period of amniocentesis, whereas a conviction of a good result prevailed in them during the period of waiting for the results.

Zusammenfassung

Untersucht wurde die seelische Verfassung von 46 Schwangeren im Verlauf einer Amniozentese. Einen Tag vor der Fruchtwasserentnahme, mehrere Stunden nach dem Eingriff und ein bis drei Wochen nach Mitteilung der Untersuchungsergebnisse erhielten die Frauen Fragebogen, welche die subjektive Einschätzung ihrer seelischen

Verfassung zeigen sollten. Zusätzlich führte man mit ihnen strukturierte Gespräche, anhand derer mögliche Angstquellen, die im Zusammenhang mit der pränatalen Untersuchung standen, identifiziert werden sollten.

Alle Charakteristiken der seelischen Verfassung, die in dieser Zeit beobachtet wurden, zeigten eine statistisch bedeutende Veränderung hin zum Positiven.

Einige Frauen, besonders jene, welche zuvor ein krankes Kind geboren hatten, welche mehrere spontane Fehlgeburten in ihrer Vorgeschichte und/oder konkrete Gesundheitsbeschwerden hatten, überstanden die Wartezeit nur unter Schwierigkeiten. Die Frauen, die in ihrer Reproduktion bisher unbelastet waren, die sich hauptsächlich aufgrund ihres Alters dem Test unterzogen und ein oder mehrere Kinder haben, befürchteten vor allem bei Durchführung der Amniozentese eine Schädigung oder den Verlust des Föten. Hingegen überwog bei ihnen, während sie auf die Ergebnisse der Untersuchung warteten, die Überzeugung auf ein gutes Ergebnis.

Introduction

In the last decade papers have dealt with reactions of women to prenatal diagnostics and especially to amniocentesis. The first studies were based on the conviction that it is necessary to pay attention not only to the technical problems, but also to the psychological components and effects of this procedure. It seemed probable that the women undergoing amniocentesis experience a greater distress than other pregnant women, which is provoked by the knowledge of an increased risk of a birth of an abnormal child, and by the risks connected with the length of time waiting for the results of the test.

All the hitherto explorations agree that an amniocentesis resulting in favourable issue is accompanied by significantly positive changes in the emotional sphere^{1,2,3}.

It so far remains unclear to what an extent it is possible to relate these changes to the amniocentesis itself and how far they reflect the regularly occurring fluctuation of emotional condition in the course of pregnancy.

The aim of this paper was to study the emotional changes occurring in the course of amniocentesis in a sample of the population of Czechoslovak women and to describe more closely on the basis of subjective statements the states of anxiety connected with this method of prenatal diagnostics.

Methods

The empirical research took place in the Research Institute for the Care of Mother and Child in Prague. The complete data were obtained from 46 women. Each of them was hospitalized for three days in connection with amniocentesis and the results of their tests were favourable.

The age of the women was from 21 to 41 years. The average value for the whole series is 33 years. 19 of them had an university education, 21 passed high school, two had a primary education and four were skilled workers. The predominant majority of them were married (41), four were single and one was a widow who had lived with a common-law husband for five years. 10 of them were primigravidae, 36 multigravidae. 35 women underwent the amniocentesis for the first time, five a second time and four a third time. The series includes the women with indications as follows:

- higher maternal age (35 years or more) – 22 women
- repeated abortions in personal history – 3 women
- chromosomal aberrations in one of the parents or in some relative – 9 women
- contact with mutagens – 4 women
- increased level of alpha-fetoprotein in maternal serum – 2 women
- delivery of an afflicted child – 5 women
- psychologic – 1 women

Three examinations were performed on every woman in order to ascertain changes in their physical condition during the course of the studied spell and to evaluate their experiences with amniocentesis. The first and second examination took place between the 15th and 20th week of pregnancy, the third one between the 18th and 24th week of pregnancy.

The first one took place in an examination cubicle a day before amniocentesis. Each woman was first informed about the aim of the study and asked for cooperation. In case she consented (6 women denied participation), the contents of the first meeting was a structured conversation with open questions. In its course some of the statments and comments of the women were recorded verbatim. Subsequently the women received the STAI questionnaire⁴, the forms assigned to self-estimation of the states of anxiety and the questionnaire of moods establishing the profile of four emotional states – comfort, activation, introversion and tension that were derived by means of a factor analysis⁵.

The second examination took place in the sick room in the presence of other patients three to six hours after the sampling of amniotic fluid. The last examination was realized one to three weeks after the woman has received the results of the test. Also in the course of two examinations the women were engaged in a structured conversation and they were given the above mentioned questionnaires.

Results

The trend of the changes of quantitative data in the course of the studied spell was ascertained by means of the test of the variance analysis.

Between the 1st and 2nd measurement there were no statistically significant differences as for the comfort, activation and anxiety. The scores of introversion and tension decreased significantly ($p < 0.05$).

Between the 2nd and 3rd measurement there were highly significant changes in all studied variables with the exception of introversion. The scores of activa-

tion and comfort increased ($p < 0.01$) and the scores of tension ($p < 0.05$) and of anxiety ($p < 0.01$) decreased.

Between the 1st and 3rd measurement the scores of introversion ($p < 0.05$) and of tension and anxiety ($p < 0.01$) decreased significantly and the scores of activation and comfort increased ($p < 0.01$). See Table 1.

Table 1.

Changes in the course of the studied period (N = 46)

	Measurement		
	1	2	3
Anxiety	42.33 ± 9.75	39.87 ± 8.91	35.37 ± 8.27
Comfort	25.52 ± 32.24	31.39 ± 35.97	53.85 ± 25.74
Activation	9.07 ± 32.91	5.72 ± 44.73	35.74 ± 32.95
Introversion	7.91 ± 20.45	-1.02 ± 22.23	-0.76 ± 17.90
Tension	-37.63 ± 24.79	-45.72 ± 23.87	-52.85 ± 18.08

Statistical significance

	Measurement		
	1 ↔ 2	1 ↔ 3	2 ↔ 3
Anxiety	N.S.	$p < 0.01$	$p < 0.01$
Comfort	N.S.	$p < 0.01$	$p < 0.01$
Activation	N.S.	$p < 0.01$	$p < 0.01$
Introversion	$p < 0.01$	$p < 0.05$	N.S.
Tension	$p < 0.05$	$p < 0.01$	$p < 0.05$

In the course of the structured conversation some subjective statements concerning the fears and concerns connected with the amniocentesis were recorded. It was found that some women, above all those having a negative reproductive experience (increasing the probability of a negative adverse outcome), went above all through the period of waiting for the results with greater inconveniences.

The women with a negative reproductive history experience and single women experienced even immediately before amniocentesis the greatest jeopardy to be the risk of a delivery of an afflicted child. The risks connected with the procedure itself receded into the background. They perceived amniocentesis rather as a help than as a jeopardy.

The women with a normal reproductive history, having mostly the age indication for the test and one or more healthy children feared most a damage or loss of the fetus at the time of amniocentesis. When waiting for the results, the persuasion prevailed in them that everything will be alright.

For these women the decision itself, whether it is necessary to undergo amniocentesis, seems to be most stressful. They experience a conflict between accepting responsibility for possible negative consequences of amniocentesis for a

healthy fetus or for a delivery of an afflicted child in case of denying prenatal diagnostics. In case they did not have enough time for evaluation or all arguments for and against amniocentesis and their decision was hasty, frequently passive, depending on the authority of the doctor or other people, especially of the partner or relatives, then their unsolved "conflict of responsibility" was a source of a, sometimes even very strong, tension, anxiety and of a hopeless feeling to be "caught in a trap, from which there is no escape". It is hardly possible to suppress the anxiety issuing from this conflict, especially if the amniocentesis is connected with hospitalisation and the woman, who so far tried "not to allow an idea to enter their head" and to rely upon the doctor and the usual procedure, is suddenly exposed to an impact of frequently controversial information from fellow patients and from health staff and the subjectively perceived unambiguity becomes unmaintainable.

Discussion

In the period from waiting to amniocentesis up to notification of the favourable results of the test, statistically significant positive changes occurred in the studied characteristics of the emotional condition.

Up to now the question, how to interpret these changes, remains unsolved. Some see a proof in them that the amniocentesis increases the psychologic well-being in women having a high-risk pregnancy¹, the others explain it as a recovery of the original psychic condition, which was impaired by experiencing the jeopardy connected with the procedure². The studies that used a control group of pregnant women without prenatal diagnostics suggest that these changes are not in a causal connection with the procedure itself, but that they probably reflect the usually occurring fluctuation of emotional condition in the course of pregnancy^{5,6,7}.

The all-round tendency towards improvement of the emotional condition in the mentioned study may be caused by some characteristics of the sample, above all by the predominance of women having an age indication and being without negative reproductive experiences. Some studies have proved significantly higher levels of anxiety in pregnant women with a previous delivery of an afflicted child^{2,8,9}. It is possible to suppose in the women with a negative reproductive experience that they will be primarily focussed to the outcome of pregnancy and that they will experience a considerable distress even after announcement of a favourable result of the test.

On the basis of the structure conversations it is felt that, from the psychologic and ethic point of view, amniocentesis should be recommended well in advance, so that the woman might visit the genetic clinic, obtain all necessary informations, and consider prudently all the pros and cons by herself. This way it would hardly be possible to be put out of countenance of upset later on, and she could feel to be the "master of the situation". Besides the termination of the decision phase, also the psychological preparation for the test and ample support from health personnel in case the pregnant woman wishes to undergo amniocentesis

is an equally important condition for decreasing the distress connected with the prenatal diagnostics.

This means that it is necessary to manifest one's interest in the condition of the woman in order to relieve her of the feeling of anonymity and insignificance, and to stress that the situation is under control and that the security of the fetus is incessantly considered.

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