

# Knowledge, Attitudes and Acceptance of Amniocentesis Clients in Ramathibodi Hospital

Sauwakon Ajjimakorn MD,\*  
Chalerm Sri Thanuntaseth MD,\*  
Mayuree Jirapinyo MD,\*  
Tongtis Tongyai MD,\*  
Daoroong Kangwanpong Dr. rer.nat.\*\*

\* Department of Obstetrics and Gynaecology

\*\* Department of Pathology

Faculty of Medicine Ramathibodi Hospital

Mahidol University

Bangkok 10400, Thailand

**Abstract :** *Ninety-seven amniocentesis clients were surveyed for their knowledge, attitudes and acceptance of amniocentesis. Only 72 clients (74%) responded to the questionnaire. The study showed that knowledge of the clients of A/C were 61%. All accepted the procedure after pre-amniocentesis counseling. Ninety-six per cent had no distress or mild distress during the procedure. Twenty-six per cent had mild anxiety and 3% had moderate level of anxiety before the procedure. After the procedure 36% had mild degree, 21% moderate and 17% severe degree of anxiety. The anxiety level decreased after the test results to 17% of mild degree, 3% moderate and 5% severe degree of anxiety. All of the respondents who plan to have future pregnancies will accept the procedure again. (Thai J Obstet Gynaecol 1989; 1:133-7.)*

**Key words :** amniocentesis, knowledge, attitudes, acceptance

Genetic amniocentesis (A/C) has been established at Ramathibodi hospital since 1983. Before establishing the service, we explored the knowledge, attitudes and acceptance of pregnant women toward prenatal diagnosis (PND).<sup>(1)</sup> Only 19 per cent of them had any knowledge of PND but 91 per cent would accept the PND if they were at risk.

In this report, the knowledge, atti-

tudes and acceptance of amniocentesis were investigated by a retrospective study of a population of women who had previously undergone PND by A/C for various indications (e.g. : advanced maternal age, previous abnormal chromosome infants, etc.). Some of them have now delivered normal healthy infants and some of them were still continuing their pregnancies at the time of

the investigation.

## Materials and Methods

The study included 97 women who had undergone amniocentesis at Ramathibodi Hospital from September 1985 to June 1988 for various indications (advanced maternal age, previous abnormal chromosome infants, previous multiple organ anomaly babies, etc.). A questionnaire consisting of 33 questions was compiled to obtain clients' profile, namely, age, parity, education, socio-economic status and to assess the knowledge, attitudes and acceptance of A/C for PND. A questionnaire was mailed to each client accompanied by a cover letter that requested participation and asking them to return the completed questionnaire. After one month a repeat questionnaire was mailed to the clients who had not returned their first questionnaire.

Responses to questionnaire items were examined and analysed using a microcomputer.

## Results

### *Characteristics of the study population*

Of 97 women who were contacted by mail, 72 completed and returned the questionnaire resulting in a response rate of 74 per cent. The mean age of the respondents was 39 years. Ninety-three per cent were Buddhists, 6 per cent were Christians and only one per cent were Muslims. Almost half of the respondents had graduate education (44

per cent) while 22 per cent had primary school education only and 17 per cent had high school and college education respectively. Some general characteristics are shown in Table 1.

**Table 1** Characteristics of the respondents (N = 72)

Characteristics (%)		Income (฿)	
Age in years		<1,000	6.9
< 26	2.8	1,001-3,000	15.3
26-30	15.3	3,001-5,000	11.1
31-35	18.1	5,001-10,000	20.8
36-40	34.7	>10,000	45.8
> 40	29.4		
Educations		Parity	
Primary school	22.2	0	30
Secondary and high school	16.7	1	31.4
College	16.7	2	20
Graduate	44.4	>3	18.6
Religions		No. of living children	
Buddhism	93.1	0	22.9
Christian	5.6	1	35.7
Muslim	1.4	2	27.1
		>3	14.3

### *Knowledge of amniocentesis*

Sixty-one per cent of the clients had knowledge of A/C before undergoing the procedure. Forty per cent obtained their information from physicians, 22 per cent from mass media (newspapers, television), 10 per cent from friends or relatives. Eighty-four per cent were advised to have A/C by physicians and 6 per cent by relatives and mass media respectively.

### *Attitudes and acceptance to amniocentesis*

Eighty-eight per cent accepted A/C immediately after the advice. Ninety-

four per cent had preamniocentesis counseling, only 6 per cent did not. Ninety-three per cent knew the reasons for A/C while 6 per cent did not.

The majority of indications for A/C were advanced maternal age (51 per cent), 29 per cent had previous chromosomal abnormality in a child (Table 2).

**Table 2** Indications for amniocentesis

Indications	Per cent
Maternal age	51.4
Previous abnormal chromosome	29.2
Previous handicapped child	4.2
X - linked disease	2.8
Other	11.0
No response	1.4
Total	100

The amount of stress and anxiety before, during and after the A/C are shown in Table 3. Seventy-one per cent had no anxiety before the procedure (after counseling) while 26 per cent had mild anxiety. Fifty-four per cent had no stress during the procedure, while 42 per cent and 4 per cent had mild and moderate degree of stress. After the procedure, the numbers and degree of anxiety were increased, 17 per cent had severe degree of anxiety while 21 per cent and 36 per cent had moderate and mild degree of anxiety. Only 25 per cent remained with no anxiety after the procedure. The degree of anxiety decreased after the test results were available. Only 5 per cent had severe degree of anxiety, 3 per cent had moderate and 17 per cent had mild anxiety. Seventy-five per cent had no anxiety after the procedure. Ninety-six per cent thought

that their decision-making for A/C was right and eighty-nine per cent of them would accept A/C in next pregnancy (Table 4). The reasons for the acceptance were confidence in the obstetricians' skill and the low risk of the procedure (80 per cent). Nine per cent of non-accepted respondents was because they had completed their families by tubal ligation.

**Table 3** Stress and anxiety of A/C clients

Stress and Anxiety	% of Response			
	1(none)	2(mild)	3(mod)	4(Severe)
Anxiety after counseling	71	26	3	-
Stress during the procedure	54	42	4	-
Anxiety after the procedure	25	36	21	17
Anxiety after the results	75	17	3	5

**Table 4** Decision making and acceptance of next pregnancy.

	Yes(%)	No(%)	No response
Decision making (right or wrong)	96	1	3
Accepted A/C in future pregnancy	89	9	2

When asked about the period of waiting for results, 44 per cent said it was too long and 56 per cent said it was not.

#### *Attitudes and acceptances after abnormal results*

Seventy-four per cent would accept termination of pregnancy when the fetuses were affected whereas 16 per cent would continue their pregnancies and 10 per cent were undecided. Sixty per cent reported having difficulty in making a decision when the abnormali-

ties had been discovered and 35 per cent reported no difficulty.

## Discussion

The demographic characteristics of the participants in this study were somewhat different from our previous study<sup>(1)</sup>. The mean age of this study was 39 years while the previous study was 27 years. This could be explained by the fifty-one per cent of advanced maternal age indication in the study. The educational level was also higher than the previous one, 61 per cent in this study and 31 per cent in the previous study had an educational level higher than high school.

The knowledge of A/C among the respondents had increased from 0 per cent to 61 per cent. This figure was almost the same as the study of Lippman - Hand in 1981 (68 per cent)<sup>(2)</sup>. The majority of them had learned about A/C from the physicians (41 per cent) and 22 per cent from the mass media (newspapers, television) which showed that health care providers especially physicians and the mass media had shown an increased concern about PND. This will effect the acceptance of the PND service.

Eithy-eight per cent of the participants who were at risk of having an abnormal fetuses accepted PND after first counseling while 91 per cent of pregnant women in our first study had shown acceptance of PND if they were at risk. Seventy-four per cent accepted termination of pregnancy when the fetuses were affected compared with almost the same number of 78 per cent in

our first study.

Even though the major indication for A/C in this study was advanced maternal age as in other reports<sup>(3,4)</sup>, the number in this study was only 51 per cent while Marine et al<sup>(3)</sup> reported 76 per cent and 90 per cent in Robinson's report<sup>(4)</sup>. The difference in this figure could be explained by the fact that since this new service was introduced to pregnant women who had no idea of both their risks of having abnormal fetus and the PND service, those who had suffered from having an abnormal fetus would accept PND service better than those who had no problems before. After having recognised their risks and the confidence in the procedure, it is anticipated that the indication of advanced maternal age will total 90 per cent of all indications.

The study showed that the anxiety level of the clients was significantly increased after the A/C procedure ( $P < 0.001$ ). After the test results had been received the anxiety decreased to almost the same as the anxiety before the procedure and this was the same as previous studies<sup>(4-6)</sup>. The period of waiting for the test results was the most stressful psychologically for most women<sup>(7, 8)</sup>. This study confirmed other reports. To reduce this anxious period we have now reduced the mean culture time from 18 days to about 10 days<sup>(9)</sup>.

Half of the A/C clients had no stress during the procedure and half of them had only a mild degree of stress. All except one said their decision to have A/C done was right and they would accept A/C in their future pregnancies.

The reasons for the acceptance were their confidence in the obstetrician's skill in performing the procedure and the low risk of the procedure (80 per cent), good service 5 per cent, and 8 per cent said because they were at risk. The rest of the non-acceptance group were not at risk since they had completed their pregnancies and had had tubal ligation.

In conclusion, the study has shown that there is increased knowledge of A/C among women at risk. There is a need for more information about PND in the form of physician's education, pamphlets and mass media. The attitudes of the A/C clients to the procedure were quite receptive, only 4 per cent had moderate degree of stress to the procedure. The anxiety level of the clients was increased after the procedure and decreased after their test results were available. Almost all of the women who planned to have future pregnancies would accept the A/C procedure again.

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