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Original Research Articles

Factors that may influence adherence in a university based program for the prevention of mother -to- child transmission of HIV in Yaoundé – Cameroon

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Abstract

Background: The prevention of mother-to child transmission (PMTCT) is considered as a major strategies to fight the HIV infection in children. Very few study have analyzed the uptake, adherence and the retention of the pregnant women in the PMTCT in Cameroon. The objective of this study was to identify factors that may influence adherence in the PMTCT in Yaoundé.

Methods: Over a 6 months period, we carried out a cross sectional and descriptive study from January to June 2015. We conducted the interview of all consenting HIV infected and pregnant women followed at the university teaching hospital of Yaoundé using a self-administered, structured questionnaire.

Results: We recruited 61 patients, 52% were living with HIV for more than 5 years. Close to 39% still believed that AIDS was a shameful disease. No partner was involved in the program. Although all of them have heard about PMTCT, Only 70% have really understood it, 26 patients (43%) have decided to breastfed their child for financial reasons (60%) or to follow the recommendations of the WHO (40%). Many of them complained about the high consultation fees. Many of them declared that there should be a psychologist to listen to them, and requested for further information about the program. They complained about stigmatization.

Conclusions: bad attitudes toward the HIV infection, poverty, stigmatization , low involvement of the partners, misunderstanding of the PMTCT are factors which may have a negative impact on the adherence in the program of the UTH of Yaoundé.

Keywords: HIV-AIDS, mother, child, adherence, prevention, transmission

1. INTRODUCTION

The prevalence of the endemic infection of HIV-AIDS in the general population of Cameroon is 4,3%. This prevalence has been found to be higher in women (5,6%) than in men (2,9%) [1]. The highest level of 8,1% has been found in women of childbearing age between 35 and 40 years [1]. Mother to child transmission of the HIV is considered as the most common cause of AIDS in children below 15 years. Every year more, than 7600 of children become HIV infected in Cameroon. [1-3]. The maternal mortality is one of the highest in Africa 782/100000 live births [1-3]. The prevention of mother-to child transmission (PMTCT) is then considered as one of the major strategies to fight the HIV infection in children and women in Cameroon. Although this program has been launched in 2000, only 52% of seropositive pregnant women are being followed in the PMTCT, and the university teaching hospital (UTH) of Yaoundé is one of the major hospital where the program is implemented [1]. The PMTCT program in the UTH has been launched at the same time as the national program and follows the current recommendations from the Ministry of Public health and the World Health Organization (WHO), to give highly active antiretroviral therapy (HAART) to all

UNDER PEER REVIEW

pregnant women who tested positive for HIV regardless of their CD4 count status and to treat the baby at birth [1]. The recommendation have been enlarged to enclosed the pregnant women's partner who should be involved , tested and placed also on HAART if they are found positive for the HIV infection. Little is known about the low participation and involvement of pregnant women in the program, no study have analyzed the uptake, adherence and the retention of the pregnant women in the PMTCT in Cameroon. The objective of this study was to identify factors that may influence adherence in the PMTCT of the university teaching hospital of Yaoundé-Cameroon.

2. MATERIAL AND METHODS)

Over a 6 months period, we carried out a cross sectional and descriptive study from January to June 2015. We conducted the interview of all consenting HIV infected and pregnant women followed at the university teaching hospital of Yaoundé using a self-administered, structured questionnaire. The university teaching hospital is one of the major structures where the PMTCT is implemented and which received patient referred from other health facilities for better management. We excluded patients who were pregnant and not seropositive, seropositive and not pregnant, neither pregnant nor seropositive and inadequately filled questionnaire.
The independent variables included: socio-economic and demographic variables (age, age of the pregnancy, previous pregnancy with HIV infection, marital status, education, occupation, number of children, number of antenatal visits), psychological factors: knowledge and attitudes towards HIV-AIDS disease, interpersonal relationship and involvement of the partner in the program, knowledge and attitudes towards the PMTCT recommendations.
The study has received approval from the institutional internal review board of the UTH of Yaoundé and the Faculty of medicine of the University of Nancy in France. A consent form was signed by each participant before enrollment in the study. Data entry and analysis were done using Epi-info 7.15.

3. RESULTS AND DISCUSSION

3.1 Results

Socio-demographic and economic characteristics

We recruited 61 HIV-infected pregnant patients during that 6 months period using the inclusion criteria. The socio-demographic characteristics are summarized in table 1. The mean age was 31,37 years.
The alphabetization level was 100% with more than 84% of the patients who have attended a secondary school. Sixty two per cent of the patients were single and 60% were working. More than half of the 61 patients (52%) were living with the HIV infection for more than 5 years and 66% of them have at least one child born after the diagnosis of the HIV infection was made. The diagnosis of HIV infection was made during regular antenatal screening in 65% of the cases.

Knowledge and attitudes towards HIV-AIDS disease.

More than one third (39%) of the responders believe that the HIV-AIDS was a shameful disease and 40 patients (66%) of the 61 patients had degrading and negative feelings towards themselves because they were infected by the HIV, they felt rejected, shameful and guilty.

UNDER PEER REVIEW

Partner involvement in PMTCT

Only 43 (71%) of the male partner were aware of the HIV status of the pregnant women, while 29% of the women declared that the partner was not informed about their status. Table II shows results of the test in the different category of male partners. Only 23 (38%) patients were married, and they were likely to know the status of their husband which was positive in 14 (61%) of them, 2 married woman declared that they were not aware of the serology testing of their husbands. While 38 (62%) of the patients were single and the likelihood that they did not know about the status of their partner was high, only 42% of the woman were aware of the testing in this group, from these only 2 were positive. The likelihood that the test of the male partner was negative was high in the unmarried group and the relative risk was 2, 63 95% CI[1,38-5] with a p=0,005.

The great majority (95%) of the 43 patients who have disclosed their status to their partner have also discussed with them: 28 (68,3%) of them had a positive , and compassionate reaction, while 13 (31,71%) had a hostile reaction, in some cases, the partner left them. This was more common with unmarried couple. Negatives and hostiles reactions have also been found with married couples, even when the husband was also seropositive (25% of the cases). Positives reactions has been found while the partner was seronegative in 66% of the cases. Eighteen patients did not disclosed their status to their partner, from them 10 declared that they did not wish to inform them while 7 of them may wanted to do it if they were given the opportunity.

Knowledge and attitudes towards recommendations of the PTMCT

Referrals from other neighboring hospital constituted 65% of the cases and the main reason for referral (98% of the cases) was better management. The majority of the responders (88,7%) declared that the felt welcomed in the service and most of them (70%) said that they have understood the most important information about the PMTCT. Although they said that they were given information about how to avoid the vertical transmission of the virus to their children, 26 (43,3%) of the patients have chosen breastfeeding: 60% for financial reason and 40% because breastfeeding is better as recommended by the World Health Organization (WHO). Seventy per cent of the 34 patients who did not want to breastfeed their children choose to do so because they did not want to infect their child. Concerning the program, many patients declared that the consultation's fees and the price of the exams needed to initiate the treatment were very high making it difficult for them to start the treatment as soon as the diagnosis was made as it is recommended, and to come for their monthly visit as requested by the physicians. This is illustrated by the average visit per patient which was 1, 9 while the mean age of the pregnancy was 22 weeks. The second important complaint was the need for further information and psychological support to help them cope with their disease. The stigmatization and the difficulty to discuss with the staff were other major's complaints. Finally in many occasions, the antiretroviral drugs were not available from the pharmacy making them run out of the drugs for many days. Besides all these critics, 94% of the responders were satisfied with the program and 100% of them will recommend it to a sister or a friend. **Table III** represent the identified factors that may influence adherence in the PMTCT program of the UTH of Yaoundé, and the possible recommendations to challenge these factors

3.2 DISCUSSION

The mean age in our study is higher than the one reported by Awungafac et al. in 2015 in Tiko Cameroon [4]. Many of our patients have been seropositive for more than 5 years and had previous pregnancies, which means that many of these patients have been in the program for many years. About antenatal visits, patients were supposed to be seen every month, the average number of visit was 1,9 and the average age of the pregnancy was 22 weeks, the monthly visit was not always respected or patients were new in the program, we

UNDER PEER REVIEW

did not investigate how long they were in the program. More than 84% of the patients have attended at least a secondary school which is a positive factors for better understanding of the PMTCT recommendations as it has been shown that higher education is a positive factor for a better adherence and retention in a PMTCT program [4, 5,6]. From an individual point of view, many of the patients in the program were single, and without an employment which may considered as negative factors, and as such would have difficulties to pay for the consultations and exams fees and milk for their babies. Certainly financial burden due to the exams and the consultation fees is a serious handicap for a better adhesion and retention in the program, as Ayuo et al. and Otieno et al. have reported from Kenya, finance play a role in keeping patients adherents to the program [7,8].

More than one third of the responders (39%) view the HIV/AIDS infection as a shameful disease and 2/3 have a bad opinion about themselves: this is very important because psychological factors and feelings are important consideration in the acceptance of the disease and the life drive and play a major role in the adherence and retention into a PMTCT program as has been reported by many [7, 9]. There is a need to change these feelings, the patient themselves requested for a psychological support: they needed someone to talk to about their fears, and they complaint about the inability of the staff to listen to them. It has been shown that some kind of psychological support is useful to the patients before initiation in the program [10]. Changing knowledge and attitudes toward HIV infection could be beneficial for adherence in the program.

Disclosure of the status to the partner and their involvement in the PMTCT program are major factors for the initiation, adherence, and retention of the female in the program [6-8] .The current WHO's program involve male partners [1]. In this study, the male partners were totally absents, it has been shown that male participation turn around 17-18% [5] in PMTCT activities in Cameroon. In this study no male was coming to the antenatal clinic with his wife and the HIV status was not even known by all the females as it should be. Disclosure to the partner has been found to be beneficial for women in the PMTCT, because they feel like a need to have permission and blessings from their partner to participate in the treatment program [11]. Male Partners are part of the PMTCT, and as such efforts should be made to invite male partners to attend antenatal clinics with their women. We could recommend couple workshops and sensitization in the community as this would be beneficial for the program and improve the recruitment of more patients.

There still some form of stigmatization and indiscretion towards HIV infected patients in the UTH's PMTCT although significant effort have been made, these are negative factors that could prevent adherence and retention into the program [6-7].

The consultation's fee and the price of exam are serious handicap at the initiation of the treatment and for the adherence in the program, many of the responders have a low income or no income at all and during their pregnancy it is difficult for them to pay for the monthly consultation fee, Ayuo et al. have shown that retention was dependent on the finances of the patients [7]. Few study have analyzed this fact, but in Cameroon as in many low income countries, there is no social security and many patients have no insurance to help them pay for health's expenses. The government of Cameroon Is making the antiretroviral drugs free for everyone, but patients and their families have to help themselves with the rest of the expenses. Many protocols have to take that fact into consideration as it is an important cause a delayed treatment and contribution to bad prognosis [6,12]. Half of the patient refused to breastfed the baby to avoid transmission of the disease, while the other half wanted to do so without hesitation for financial reasons or because they believe it was good for the baby although finances issues were comparable in both groups; this mean that understanding the PMTCT is still below required level; and more information, sensitizations are needed to be done to make sure all the patients understand very well the PMTCT's recommendations [12].

UNDER PEER REVIEW

Table 1. Sociodemographic characteristics of the repondents

Variables	N=	mean	mode	minimum	maximum	Standard deviation	Variance
Age (years)	61	31,37	33	18	44	5,35	28,1
Pregnancy's age (weeks)	61	22,18	24	2	42	9,64	93
Number of children	61	2,14	3	0	5	1,4	2,12
Number of antenatal visits	54	1,9	0	0	7	1,8	3,48

Table II: Frequencies of the HIV testing and results among male partners.

Category	Number/percentage
Number of male partners who took the HIV testing	37 (60, 6%)
Non-tested male partners	19 (31,3)
Unknown testing	5 (8,1%)
Married male partners who did the HIV testing	21(57%)
Unmarried male partners who took the HIV testing	16 (43%)
Number of partners who tested positive	16 (43%)
Number of married partners who tested positive	14 (87, 5%)
Number of unmarried partners who tested positive	2 (12, 5%)
Number of partners who tested negative	21 (57%)
Number of married partners who tested negative	7 (33, 3%)
Number of unmarried partners who tested negative	14(66, 6%)

Table III: Identification of factors that may influence adherence and possible recommendations for improvement

Level	Factors	PMTCT of UTH	Recommendations
Personal: socio-demographics	Age	high	none
	Education	High, very good	none
	Marital status	Many single	none

UNDER PEER REVIEW

		women, negative	
	Knowledge and attitudes towards AIDS	bad	More information and psychological support
	Knowledge about recommendations of the PMTCT: breastfeeding	bad	More information
Personal: economics	Labs tests and consultations fees	expensive	Financing (NGO, government
	Milk (infant)	expensive	financing
	HAART	Free (very good)	none
Interpersonal	Partner testing and involvement	Bad,	Invite partner, workshops with partner, better use of the community agent
Community	stigmatization	negative	Psychological support, community agent
Program and Health politics	Health professional	Welcome to be improve, less stigmatization No Psychological support	Recruitment of a psychologist or community agent to play this role, listen to the patients
	Labs test fees	expensive	Financing, NGOs
	pharmacy	Shortage of drug	Improve system, anticipate

4. CONCLUSION

Wrong and bad knowledge and attitudes toward the HIV infection, poverty, stigmatization , low involvement of the male partners, misunderstanding of the PMTCT are majors factors which may have a negative impact on the adherence in the program of the UTH of Yaoundé. Efforts should be made to better inform the patients, for exemple by editing information booklets, recruit a psychologist and increase the participation of the male partner. The government has to do something about financing the required exams during pregnancy, and request help from the international organizations to help patients in an environment where there is no social security. These are very important factors to take into consideration if one is to expect to increase the participation of women in the program.

UNDER PEER REVIEW

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