Received: 3 Jun.2007 **Accepted: 16 Sep.2007**

Original Article

Preconceptional care for diabetes: health care provider experiences on how the patients face disease and pregnancy

Nafiseh Sadat Nekui, Ashraf Kazemi**, Sharareh Davazdah Emami****

Abstract

Background: Preconceptional care is very effective to ensure mothers and babies health during and after pregnancy. The clinics and health center personnel are able to offer preconceptional care especially to the risky cases. Learning about the experiences of health center personnel in such cases is useful for others to find solutions for the same problems which may come up. This study tends to consider these experiences.

Methods: This was a qualitative study based on the phenomenology method. The participants included the personnel of public health centers as well as some private clinics. Sampling was based on the objectives and the sufficient data soaked up by 15 participants. Data gathered through deep interviews during nine months from November 2005 to August 2006 and the Colaizzi method was used for data analysis.

Results: The phenomena appeared in this study regarding the health care provider experiences and descriptions of how the patients face the disease and pregnancy were as following; patients and family, teaching the patients.

Conclusion: Health care provider can be the best options for educating diabetic pregnant women and their families regarding preconceptional care, because they have the opportunity to access and communicate with this group of patients.

Key words: Diabetes, health care providers' experiences, preconceptional care

IJNMR 2007; 12(4): 115-119

One of the effective factors in the health of mothers and babies during and after pregnancy is preconceptional care. It is the most preliminary and consequential way to improve public health and especially to prevent congenital abnormalities (1). Preconceptional care is a main factor in decreasing the perinatal mortality and increasing physical and physiological health of the society, by ensuring healthy progress of pregnancy until the birth of a healthy baby from a healthy mother (2). One of the major tasks in preconceptional care is the diagnosis of chronic diseases such as diabetes. According to the United States statistics in 2002, 8.7% of the American women over 20 years of age were suffering from diabetes mellitus and almost 0.3– 0.5% of the pregnancies happened to diabetic women (3).

Diabetes is a chronic disease which can lead to pregnancy complications such as miscarriage, stillbirth, congenital abnormalities, and fetal defects once synchronizes with pregnancy and remains uncontrolled. Preconceptional care can decrease these risks (4). Studies showed that most diabetic women are not aware of pregnancy risks.

More than two third of them become pregnant without any planning and as a result their blood sugar remains uncontrolled before pregnancy. Therefore, it is necessary to plan for increasing access of these patients to health care as well as their knowledge and concern about preconceptional care (5-7).

A study on diabetic women revealed that in the cases of planned pregnancies with preconceptional care, the health situation of both moth-

* MSc, Department of Midwifery, School of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran.
** MSc, Department of Midwifery, School of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran.
*** MSc, Department of Midwifery, School of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran.
Correspondence to: Nafiseh Sadat Nekui MSc.
E-mail: nekui@nm.mui.ac.ir

er and infant was better. This study proved the importance of preconceptional care (8).

Preconceptional care for diabetes women includes precise control of blood sugar before pregnancy, genetic counseling, assessment of diabetes complications, checking the possibility of
diabetes transmission and the effects of pregnancy on mother and infant (9), and using contraception until they want to become pregnant.

A study on the relationship between performance and beliefs of the health care team regarding preconceptional care showed that, according to the team, the obstacles for preconceptional care included lack of necessary resources (money, space, manpower, time), lack of contact with women planning to conceive , lack of special training on preconceptional care for personnel, underestimating the importance of preconceptional care among patients, and that risky cases in need of special care were not referred directly to the health centers (10). Provider of health centers and private clinics who are in contact with the women of productive age can act as good sources to present them necessary information and solutions to their problems. Gathering such experiences of the health care provider can help better understanding of the problems and finding better solutions. Therefore, this study tends to gather the primary health care provider experiences about preconceptional care for diabetes, focusing on how the patients face the disease and pregnancy.

Methods

This study was qualitative using the phenomenology method. The area of the study limited to the diabetes center under the Social Insurance, health clinic center under the Khurasgan Social Insurance, and several private clinics in Isfahan. The sampling period was from November 2005 to August 2006. The studied participants included health care provider of the above centers (regardless of their educational degree), who directly were in contact with the diabetes women of the productive age. It was also considered as criteria that the participants should have the experience in preconceptional care of diabetes and should be eager to participate in the study. The researcher referred to the health centers and clinics to select the participants, explain the research goals to them, carry out a nonstructural interview with them and record all the interviews on a cassette tape with the participants permission. Each interview lasted between 20-60 minutes as necessary. All interviews were transcribed. 15 participants provided sufficient data and there was no new code in extra interviews. Final data were shared with the participants to ensure the results' consistency and it was proved that the final data agreed with their real opinion. Data were analyzed using the Colaizzi method which comprises seven steps. In the first step, the researcher carefully read each transcript and reviewed them several times to get an overall sense of them. In the second step, significant statements and terms were extracted from the transcripts, which in the third step of Colaizzi method, were conceptualized, formulated and set in 64 codes. In the fourth step, the researcher organized obtained concepts in significant categories. In the fifth step of Colaizzi, the two major notions and six sub-notions were put together with a complete description of details as a general and pivotal notion of "patients' faced with the disease and pregnancy". This notion provided the basis for the study.

Results

Three of the fifteen participants were midwives, six of them were general physicians, two were gynecologist, three were specialists in internal medicine, and one of them was an expert in family health. Data analysis led to two main categories of the health care provider experiences on preconceptional care of diabetes. The first one was about the patient and her family including; their reactions toward pregnancy (the patient and her family), ignorance of the pregnancy complications, the disease and gestation, patients' knowledge, attitude and performance. The second one was patients' education including; Sensitizing, The role of contraceptive programs and the quality of education.

These categories somehow covered all the contents of the interviews. There were various

items mentioned in the interviews regarding the first item, which are the patients and their family's reactions toward pregnancy. For example, the participant number 6 said "in cases that the woman comes from a low culture, if she has no baby, she won't accept not getting pregnant at all" and it was coded as "the cultural level is related to the acceptance of not getting pregnant". Another participant said that "there are few problems with husbands, but most women attribute their opinion to their husbands while it is their own culture to oppose". Another sub-notion found in this study was being aware of the pregnancy complications in diabetes. In this regard, one of the participants mentioned that "most diabetic women do not differentiate between visits of normal pregnancies and diabetes pregnancies and it can be related to their ignorance of the pregnancy complications in diabetes".

There were also some experiences mentioned about attitude which is the third sub-category of the first theme. One of the participants said: "patients with abortion or stillbirth history are more probable to agree with a complete control before pregnancy and not to get pregnant right away". According to some participants, some of the patients have a different attitude toward the problem. One of the interviewees mentioned that some of the patients just care for themselves and their disease without thinking that there is a baby involved as well.

The diabetes performance is another sub-notion found in this study. The patients act differently, as a participant stated that "a majority of patients referred to clinics to control their blood sugar too late when the golden period of pregnancy was over". Diabetic patients, who rarely refer to clinics for special care, mentioned different reasons. According to one of the participants, being worried about the husband's reaction can affect her performance once he finds out about the pregnancy complications of his wife.

The notions put in the second category were obviously mentioned in the interviews. For instance, the participant number 7 stated that "most of the patients are not aware of the diabetes induced complications during pregnancy and they need to be reminded of". This experience was coded as "lack of understanding about the sensitivity of diabetes pregnancy".

Health care provider experiences regarding the contraceptive programs for diabetic women are a sub-notion of the second theme. The participants also mentioned some ideas about birth control programs for these patients. A majority of them believed that it is strongly necessary to educate diabetic women especially in multipar and serious cases of disease about contraceptive programs. A participant said "if a woman wants to get pregnant anyway, she should try it while she is younger and her disease is not too serious. In some cases, a diabetic was strongly encouraged for birth control in the first stages of disease and after 10 years when her disease got serious and she got older, she and her husband wanted a second or third kid. Therefore, in cases that cannot be convinced to avoid pregnancy forever, they should get pregnant in early stages with some preconceptional care and control". This case clarifies the need for particularity in offering contraceptive programs to diabetic women. The participants in this study believed that no matter how much it costs, unwanted pregnancies in diabetics should be prevented. Another sub-notion of this study was the education quality of diabetics about their disease and pregnancy. One of the participants said: "unfortunately the medical team does not educate the patients about the pregnancy complications of diabetes". This statement shows the necessity of setting up an educating program in every possible way. One of the health care provider said "it is better to tell the truth to the patients and not to scare them".

Discussion

One of the major notions found in this study was the patient and family. The sub-notion for this was the reaction of patient and her family. The way patient and her family react toward the disease and pregnancy can affect the process, timing, and the result of the pregnancy. The results of this study showed that the diabetes has different reactions toward their

pregnancy. Some are afraid of transmitting the disease to their infant, or to end in pregnancy complications for either mother or baby. The results of a study on 138 diabetes women showed that 41% of them were afraid of having a diabetic baby (11).

The husbands' knowledge and attitude toward preconceptional care have a deep influence on the quality of the care. In this study, most of the health care personnel believed that the husbands of their patients had appropriate reaction when the problems were clearly explained to them.

Another sub-notion of the study was ignorance about the pregnancy complications, disease, pregnancy, and also the attitude and performance of patients toward it. A majority of participants believed that patients did not have enough knowledge of diabetes and the pregnancy complications it may cause. Health beliefs are influenced by the economic, cultural and religious class. The results of a study in 2003 on knowledge of diabetes about counseling before conception showed that 80% of them were not completely aware of the preconceptional care before conception and 48% had no idea of the risks of congenital abnormalities (11).

The second major notion of the study was patient education. Health care provider specially those working in the contraception units have good opportunities to access and contact diabetic women and can be the best source to educate them and give them the information they need (12). Most of the participants in this study believed that if they teach the patients about the situation, the patients will easily accept to be controlled before pregnancy. It will make the pregnancies of this group more successful and the result of their pregnancy will be improved. Thus, it is necessary to the public health centers as the first governmental organizations in charge of teaching birth control play their role correctly. Educating women needs special care to prevent any unwanted pregnancy. Certainly education can be effective in this regard.

Another major notion of our study was sensitizing patients. It is a general rule that once people are sensitive toward a problem, they will be more careful about it. The rule is the same about preconceptional care. To get better results, we should sensitize patients to the problem so that they follow the problem by themselves. This sensitization can be done partly by educating and partly by giving them concrete evidence of the problem. According to the experiences of the participants in this study most patients were not sensitive to the preconceptional care. The results of other studies also showed that most diabetics still receive negative hints about pregnancy. Women, who plan for their pregnancy distinctively, receive more education, have more care for their health and pay regular visits to gland specialists before pregnancy. This group has good and positive contacts with health care provider. Providing information about pregnancy and improving the support and quality of relationship with the health system will increase planned pregnancies in diabetics (13).

Another sub-notion found in this study was the health care provider experiences about contraception. The participant's experiences showed that health care personnel do not pay enough attention to the necessity of contraception for diabetic women in productive age. In many cases, diabetic women did not have a suitable birth control plan, which was due to their own or the health care personnel unconcern.

According to previous studies, since two third of diabetic women have unplanned pregnancies, all diabetic women in productive age should receive preconceptional care, including counseling on the complications of an unplanned pregnancy and suitable contraception method until their disease is well-controlled and their body is ready for pregnancy (14).

The last sub-notion of this study was the quality of patient education. According to the participants experiences it is necessary to held group or private educating sessions for diabetics, publish some pamphlets and brochures and also get help from mass media. It is an important point that the husbands of diabetic women should be present in counseling sessions before pregnan-

cy. It will help to understand his attitude and knowledge about the potential pregnancy complications in diabetics and improve it if necessary (14). The husband' support for pregnant women is of high value for her psychological health during pregnancy, therefore he needs to receive special instructions in face to face sessions about his wife's needs (15).

This study concludes that to offer appropriate health care services to diabetic women before pregnancy different influencing factors should be considered. According to the existing experiences, lack of desirable services has direct consequences such as unwanted pregnancies in diabetic women.

Regarding how diabetic patients face the disease and pregnancy, most of the health care provider participated in this study believed that many patients would easily accept to follow up the problem once they were told and sensitized about it. In addition, since the contraception methods are case sensitive in diabetes, it is necessary to educate them about it whenever they refer to a clinic. All diabetic women of the productive age should be under preconceptional care regardless of their wish for getting pregnant or not, and the high risk groups such as high class diabetes and women with sufficient number of children should be identified and given special care. The study showed that many of the patients do not have enough information and knowledge about the pregnancy complications in diabetes. The health care personnel are responsible for educating and informing them. Finally, the preconceptional care team performance, the way of contacting with patients, educating and informing them are important points for an ideal preconceptional care.

References

1. *Czeizel AE. Ten years of experience in preconceptional care. Eur J Obstet Gynecol Reprod Biol 1999; 84(1):43-9.*
2. *Dunkley-Bent J. Health Promotion in Midwifery. Edinburgh: Bailliere Tindall; 2000.*
3. *Bernasko J. Contemporary management of type 1 diabetes mellitus in pregnancy. Obstet Gynecol Surv 2004; 59(8):628-36.*
4. *Crocker A, Farrell T. Pregnancy and pre-existing diabetes: key concerns. Hosp Med 2004; 65(6):351-4.*
5. *Boulot P, Chabbert-Buffet N, d'Ercole C, Floriot M, Fontaine P, Fournier A et al. French multicentric survey of outcome of pregnancy in women with pregestational diabetes. Diabetes Care 2003; 26(11):2990-3.*
6. *Ray JG, O'Brien TE, Chan WS. Preconception care and the risk of congenital anomalies in the offspring of women with diabetes mellitus: a meta-analysis. QJM 2001; 94(8):435-44.*
7. *Smahelova A. [Preconception care of the type I diabetic patient from the viewpoint of the diabetologist]. Vnitr Lek 2002; 48(12):1118-22.*
8. *Jaffiol C, Baccara MT, Renard E, Apostol DJ, Lefebvre P, Boulot P et al. [Evaluation of the benefits brought by pregnancy planning in type 1 diabetes mellitus]. Bull Acad Natl Med 2000; 184(5):995-1007.*
9. *Klinke J, Toth EL. Preconception care for women with type 1 diabetes. Can Fam Physician 2003; 49:769-73.*
10. *Heyes T, Long S, Mathers N. Preconception care: practice and beliefs of primary care provider. Fam Pract 2004; 21(1):22-7.*
11. *Knowledge about preconception care in French women with type 1 diabetes. Diabetes Metab 2005; 31(5):443-7.*
12. *Siyam S. Population and Birth Control. Behdashte Jahan 1373; 14(1 & 2):65-8.*
13. *Holing EV, Beyer CS, Brown ZA, Connell FA. Why don't women with diabetes plan their pregnancies? Diabetes Care 1998; 21(6):889-95.*
14. *Nekui NS, Pakgowhar M. preconceptional Counsellings. Isfahan: Kankash Publications; 2005.*
15. *Nasiri M. Psychological health during pregnancy and delivery. Tehran: Boshra Publications; 2000.*