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Original Research Article

Knowledge of pregnant women towards multiple sclerosis

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ABSTRACT

Background: The multiple sclerosis (MS) disease is more common in women than men with a ratio of 2.7 to 1. According to Iran MS society, there are about 80,000 MS patients in the country Iran. Having knowledge about MS can reduce significantly the anxiety and stress of pregnant women and promote their life expectancy and the probability of having a successful pregnancy and making pregnancy easier for them.
Methods: This is a descriptive– analytical study that has been done on 150 pregnant women which selected randomly and referred to health centers of Ardabil city at 2017. Data collected by a questionnaire included questions about MS. The collected data were analyzed by statistical methods in SPSS version 19.
Results: Of all women**,** 20% considered gender as one of the most effective factors in the disease and 44.7% believed that women are more likely to suffer from MS than men. The knowledge of pregnant women about MS with 63.3% was in moderate level and friends and relatives was the most source of their awareness. 43.3% of women believed that knowledge people with MS could marry. 63.3% of women pointed that the health care centers knowledge about MS was inadequate and 68.7% pointed that government's support for patients was significantly low.
Conclusions: Results showed that the awareness of pregnant women about MS was in moderate level. So, planning to increase the awareness of pregnant women in centers and support of women with MS by governmental centers seems necessary.

Keywords: Multiple sclerosis, Awareness, Women, Ardabil

INTRODUCTION

Multiple sclerosis (MS) is a chronic inflammatory disease of the central nervous system in which defensive cells of the body mistakenly attack myelin (protective sheaths of neural fibers in the brain and spinal cord.[1]

The disease usually occurs in the second to third decades of life and occurs between the ages of 20 and 45 years and the prevalence rate in women is three times that of men. The symptoms of the disease depend on the involved organ including motor speech disorders. The prevalence of MS is different depending on the geographical area and the population and in Iran 120 people are infected per 100,000 people. Also, the disease is prevalent among young people and adolescents. The spread of the disease is increasing in our country and even had the highest prevalence among Middle Eastern countries. The etiology of the disease is not exactly clear but this illness has self-safety background and factors such as genetics, infection, vitamin D deficiency and environmental factors including climate change have main role in its incidence.[2-5] Diagnosis of MS is based on clinical symptoms and confirmed by the brain and spinal MRI and the CSF test. Generally no definitive treatment for MS but by discovery of new drugs this disease is somewhat curable and controllable and prescribed drugs such as prednisone, dexamethasone and methyl prednisolone are used to reduce the duration of illness acute attacks. Increasing illness in recent years has led to a high level of psychological problems such as anxiety, stress and depression in MS patients and most of patients

with disapproval of the disease focus their attention on future problems.[6,7]

In addition, change in marital and sexual function of patients, decreased self-esteem and state of mind, limited social activities and economic problems have also reduced the quality of life in patients.[8,9] In the first half of the twentieth century it was believed that pregnancy with MS (PRIMS) is associated with a risk of relapse of the disease and sometimes abortion was also supported. But recent studies have shown that pregnancy is associated with a safe and effective condition for MS patients which is caused by the effect on T lymphocyte. The high relapse of multiple sclerosis is reduced during pregnancy and after delivery it returns to pre pregnancy state immediately.[10] MS illness is not a obstacle to pregnancy and even attacks during pregnancy reach to low rate. More known of MS and its effects on women's health, fertility and menstruation is important. Women's awareness of MS and possible changes from it can minimize the likelihood of their worries.[11] Increasing the four-fold prevalence of female infections in women and high incidence in pregnancy are issues that can increase the worry of women especially pregnant women that having awareness about MS and its issues on pregnancy can help to decide of women in the future about their lives. There is no evidence that MS has a negative effect on pregnancy and or MS leads to abortion, fetal death or congenital disorders. The results of studies show that pregnancy, delivery and fetal problems are not the same in women with MS and other women were similar. Many studies have shown that pregnancy in MS patients is associated with a low risk of progression and exacerbation of the disease. Also, the rate of relapse increases during the first trimester after delivery and pregnancy has not effect on the course of disease and long term disability in life.[12-15]

METHODS

Study design and samples

This study was descriptive-analytical that has been done on 150 pregnant women over 18 years of age who were randomly selected form referred women to the health centers of Ardabil city during 2017.

Data collection method

Data collected by a questionnaire including age, education level, occupation, MS disease course and medical treatment, knowledge and beliefs about the effects of disease on pregnancy, MS and premature delivery, breast feeding effects on MS, ways of preventing the disease and the factors affecting it.

The questionnaire included 27 multiple choice questions that one of the options in each question was correct and women's awareness score in this study variable from 1 to 19. Low awareness of 1 to 7, moderate awareness of grades 8 to 14 and high awareness of score 15 to 19.

Statistical analysis

Data were analyzed by descriptive and analytical statistical methods in SPSS version 16.

Ethically approve

All women complete the consent form and then participated in the study.

RESULTS

The average age of women in the study was 25.8±6.2 and 48.7% of pregnant women were under 25 years of age. 44% of women has diploma and 32.7% were employed. The highest level of knowledge were among employed women with a bachelor's degree and more than 35 years old but there was no significant relationship between education, occupation and age of women with knowledge level (Table 1). 25.3% of the women believed that the elderly in comparison to other age groups significantly more susceptible to the disease (Table 2). 20% of women considered gender as one of the most effective factors in the MS disease and 44.7% believed that women were more likely to develop MS than men and 20.7% pointed that menopause were considered as the most important period of the disease in women which was statistically significant (Table 3). 43.3% of women believed that women with MS could get married and become pregnant (38.7%).28.7% of women believed that if women with MS had a baby they could take care of their newborn which was statistically significant (Table 3). The knowledge level of women about prevention ways of illness was 36% and avoidance of stress and anxiety with 60.4% was the most important preventive factors (Figure 1).

Stress, anxiety and genetics were one of the most important factors affecting MS disease and avoid from stress and anxiety with 60% was the best ways of prevention of MS which was statistically significant (Figure 2). The results of this study showed that the most source of knowledge with 36.4% were friends and relatives. 63.3% pointed that the awareness level of health centers to the disease was inappropriate and 68.7% pointed that the government's support for patients was low and limited which was statistically significant. The highest and the lowest correct responses were 62.7% for non-communicable disease and 13.3% for anesthesia in women with childbirth (Table 1). 39.3% of women known MS without definite treatment and 40% believed that the disease did not cause to a complete disability, which was statistically significant (Table 2). The results of this study showed that 19.3% believed that drugs used to treat MS cause to abortion and 20.7% considered vaginal delivery as an appropriate delivery method for women with MS (Table 3).

Table 1: Relation between demographic data and knowledge rate about MS.

Level demographic data		Low		Moderate		High		Total		P value
		N	%	N	%	N	%	N	%	
Occupation	Employee	11	22.4	31	63.3	7	14.3	49	32.7	0.17
	None-employee	47	46.5	43	42.6	11	10.9	101	67.3	
Education	Under diploma	13	50	11	42.3	2	7.7	26	17.3	0.1
	Diploma	29	43.9	31	47	6	9.1	66	44	
	BS and higher degree	16	27.6	32	55.2	10	17.2	58	38.7	
Age groups	<25	33	42.5	30	41.1	10	13.7	73	48.7	0.2
	25-35	23	34.3	38	56.7	6	9	67	44.7	
	>35	2	20	6	60	2	20	10	6.7	

Table 2: The knowledge rate of women about general information about MS.

General information		N	%	P value
MS is prevalent in women than men.	True	67	44.7	0.001
	False	83	55.3	
MS is prevalent in agent groups.	True	38	25.3	0.001
	False	112	74.7	
MS is higher in cold people.	True	22	14.7	0.001
	False	128	85.3	
MS is a none-communicable disease.	True	94	62.7	0.001
	False	56	37.3	
There is no certain cure for MS	True	59	39.3	0.001
	False	91	60.7	
MS is a controllable disease.	True	61	40.7	0.027
	False	89	59.3	
MS don't deal to complete disability in patients.	True	60	40	0.001
	False	90	60	

Table 3: The knowledge rate of women about relation between MS and pregnancy and childbirth.

MS and pregnancy		N	%	P value
Patients with MS could marry in future.	True	65	43.3	0.1
	False	85	56.7	
The illness in women is more visible during menopause.	True	31	20.7	0.001
	False	119	79.3	
Women with MS could be pregnant.	True	58	38.7	0.007
	False	92	61.3	
MS hasn't effect on pregnancy.	True	44	29.3	0.001
	False	106	70.7	
MS is modulated in the third trimester of pregnancy.	True	46	30.7	0.078
	False	104	69.3	
Drug used in MS patients' cause to abortion in pregnant women.	True	29	19.3	0.001
	False	121	80.7	
Drugs used by MS patients has effect on fetal status	True	46	30.7	0.001
	False	104	69.3	
The best delivery method was vaginal delivery.	True	31	20.7	0.004
	False	119	79.3	
Anesthesia for childbirth is not forbidden in women with MS.	True	20	13.3	0.001
	False	130	86.7	
The incidence of complications in a newborn baby is not different from that of normal people.	True	28	18.7	0.001
	False	122	81.3	
A mother with MS can maintain her baby.	True	43	28.7	0.001
	False	107	71.3	

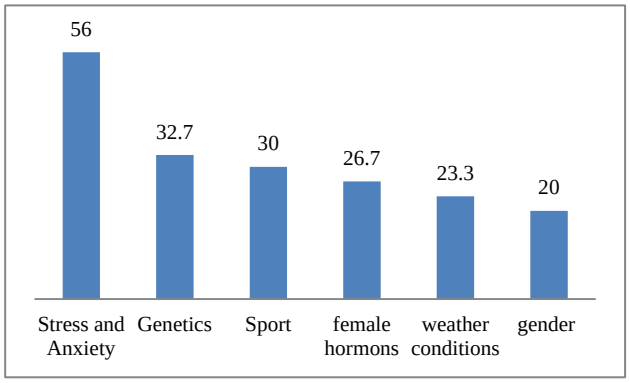

Figure 1: Effective factors on MS based women idea.

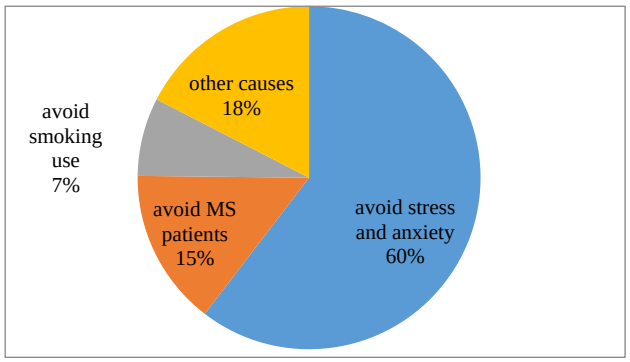

Figure 2: Knowledge rate of women about the ways of prevention MS.

DISCUSSION

Multiple sclerosis is one of the most common chronic diseases in the nervous system and like any other chronic disease, it effects the various aspects of a person's life. In this study, the knowledge of pregnant women in a high status was 20% among women over 35 years of age, 63.3% in average status among employed women and in the low level was 50% among women under the diploma . Similar to the study, in the study of Amani et al, the level of knowledge with 64% was in the moderate level. There was a significant relationship between education level and knowledge and there was no significant relationship between employee status, education with knowledge level.[16] The most source of women about MS was friends and acquaintances, Awareness of patients and their friends and relatives about the disease can play an important role in controlling the disease because knowledge and awareness of relatives of patients who are the main careers of patients, can have an appropriate response to worry, fatigue, irritability and other patient behaviors. In the present study women's awareness nature of non-communicable of MS disease was 62.7% which was lower than some internal studies such as Amani et al with 88% awareness. Awareness about the characterized of this disease is important because it affects the quality of the relationship between patients and other people. If people do not have enough information about the disease they will prevent them from getting close to them and thus increase their depression and anxiety in MS patients.[16] MS is one of the chronic diseases of the central nervous system due to its high incidence at young age leads to a reduction in individual and social efficiency. Most of MS patients are in second or fourth decades of life that this age range is a person's effectiveness period. In this study, 25% of women believed that MS is a diseases among elderly and 20.7% of them knew it a disease in menopausal women.[17] Many of autoimmune diseases have age distribution and in most cases, women are more likely to be damage than men.[18] Population based studies show that the prevalence of multiple sclerosis in women compared to men is almost constant it which may be due to the effects of sexual and genetic hormones on body immune responses. One of the symptoms that prove sex hormones are involved in the pathogenesis of MS was that clinical manifestations in women often appear at the same time as the changes in the balance of estrogen - lutein hormones that during the menstrual period, after pregnancy and during the period of osteoporosis. In the present study, 44.7% of the women pointed that the disease was associated with women and 26.7% of them know the female hormones was one of the factors affecting the disease.[1,18-19] Various studies have shown that the frequency relapse of multiple sclerosis has decreased during pregnancy especially in the third trimester of pregnancy and after delivery increased immediately and after three months of delivery it returns to pre-pregnancy status. In addition to other studies, 30.7% of pregnant women in the present study stated that MS adjusted during the third trimester of pregnancy.[20,21] Although MS is a common and complex neuropathy and its exact etiology is still unknown but epidemiological information show that both genetic and environmental factors are important in the incidence of the disease. Smoking has an important relationship with MS and other autoimmune disorders. In this study, stress and anxiety and genetics respectively with 56% and 32.7% are the most important factors which effecting the disease and avoiding smoking is one of the most important ways of preventing MS.[4,22,23] The results of this study showed that 40% of women believed that there was no certain treatment for the disease but the disease was controllable and did not cause to complete disability in patients. Studies have shown that the overall rate of disability progression even in pregnant women with multiple sclerosis during pregnancy, despite the increase in recurrence rate in the first trimester after delivery is comparable to the expected range of disability rates for non-pregnant women with the disease but the decision of a woman with MS for pregnancy is seriously affected by the disease activity. So the opinion of 43.3% and 38.7% of the women who believed that women with MS disease could get married and become pregnant seem to be correct.[20] Selective cesarean delivery is associated with high risk in women with MS but the cultural, geographic and ethnicity impacts in choosing cesarean delivery cannot be ignored. In most studies the rate of cesarean in women is between 9.6%-41.1% for example in a study by Finkelsztejn et al was 41.5% and in Anat Achiron was

13.7%. In this study, 20.7% of the women knew vaginal delivery as the most suitable delivery method for women.[24,25] The average abortion rate in pregnant women with MS is reported to be between 20-30% and in some cases pregnancy is at risk due to the use of MS related drugs. In a recent study, 19.3% of women said that drug used to treat MS cause to abortion.[24] Common and meta-analysis study show that women with MS do not have significant maternal and neonatal complications. The rate of mortality and abnormalities in these women was between 1.13% to 6.25% of total births and in many studies, there is no relationship between the mortality and abnormalities of newborns with maternal use of drug. The results of the Albrecht et al study in 2010 showed that women's knowledge about the relationship between MS and pregnancy was very low which was in line with our study results.[26]

William et al also found that pregnancy did not affect the improvement of MS and it can be useful at sometimes and the results showed that women's awareness was in moderate level which was inline our study results.[27] All the research shows that the baby's low birth weight and the birth of a premature baby in mothers was low and can be ignored. In a recent study, 18.7% of women reported that the occurrence of complications in a newborn due to woman with MS did not different from normal women.[24,28,29] Recent results showed that the knowledge of pregnant women about MS was in moderate to low rate and 63.7% of women assessed the knowledge of health centers inappropriate. By increasing the provided educational programs and increasing the awareness of pregnant women about MS by health centers in different areas is necessary in future.

CONCLUSION

The results of this study showed that pregnant women had moderate to low knowledge rate about MS disease and its effect on the fetus and prevention of it. However health centers do not have enough experience and knowledge to the referrals about MS and the government's support for establishing prevention and treatment of MS is very low which need to take effective actions in this regard in the future.

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