SHORT COMMUNICATION

Quality of life, depression, anxiety and stress among pregnant women with previous adverse antenatal record presenting in Sheikh Zayed Medical College/ Hospital Rahim Yar Khan

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Abstract

A case-control study was conducted to determine the quality of life, frequency of anxiety symptoms, depression and stress among pregnant women with previous adverse antenatal record.

Forty-five patients who presented at the Sheikh Zayed Medical College/Hospital Rahim Yar Khan with adverse pregnancy outcome in the previous pregnancy and 45 patients who had normal live birth in the last pregnancy were evaluated to assess the impact of previous experience with anxiety, depression, stress and quality of life (QOL) during the subsequent pregnancy. The study was conducted between October 2018 and April 2019. Depression, anxiety and stress scale (DASS) 21 was used to determine the anxiety, depression and stress. To determine the quality of life, Quality of life scale (QOL) consisting of 16 questions was used.

It was revealed that the study group patients had higher illiteracy rate 6 (13.3%) as compared to the control group 0 (0.00%). Rate of previous planned pregnancy was lower in the study group 6 (13.3%) as against 15 (33.3%) among controls. Anxiety, depression and stress score was also significantly higher among the study group as compared to the control group.

The study showed that women who had previous adverse antenatal record have poor quality of life, and higher degree of anxiety, depression and stress in subsequent pregnancy as compared to those who had normal live birth in the previous pregnancy. Previous pregnancy outcome should be considered along with other psychological variables to develop the conceptual model of anxiety and depression during pregnancy.

Keywords: Adverse pregnancy outcomes, Quality of life, Depression, Anxiety, Stress.

DOI: http://doi.org/10.5455/JPMA.52771

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Introduction

Pregnancy is an important experience of a woman's life.[1] It is associated with several lifestyle and hormonal changes, resulting in reduction in physical activity, weight gain and tension about prenatal care.[2] Some women find pregnancy as a way of self-recognition, while some take it as a means to clear doubts about their femininity (i.e. their ability to bear children); some women think negatively about pregnancy, which may be because of the fear of childbirth and the feeling that they are not ready for motherhood.[3]

About one in every 10 women experience some anxiety or depressive symptoms during pregnancy or at some stage one year after childbirth.[4] The prevalence is high in developing countries (up to 33%) and is low (only 10%-15%) in developed countries.[4,5] Both anxiety and depression are risk factors for adverse maternal and child health. Depressive symptoms affect placental blood flow, which may cause low birth weight, and pre-term delivery.[6]

The loss of foetus is the most traumatic and painful event in a woman's life and in some cases it is associated with a longer period of grief and mourning along with complexed psychological and physiological actions.[7,8] The result is a longer period of anxiety, and depressive symptoms.[9,10] Some studies have found a correlation between previous adverse outcome of pregnancy with depression and anxiety in subsequent normal pregnancy. A strong association of significant anxiety in women with previous pregnancy loss with anxiety and depression in subsequent pregnancy has also been observed.[11]

Previous adverse outcome brings an element of fear in the subsequent pregnancy, which leads to disturbed sleep, irritability, fatigue and lack of concentration in routine works.[8] It is very difficult to anticipate the impact of adverse pregnancy outcomes in the subsequent pregnancy, but some measurements may enable us to show the effect of previous adverse pregnancy outcome on the quality of life.

The objective of this study was to determine the quality of life and frequency of symptoms of anxiety, depression

and stress among pregnant women with previous adverse antenatal record. Psychological support is one of the most neglected part of antenatal clinic, especially for those women who have undergone a bad experience in their past obstetric history. This study was conducted to highlight this neglected part of antenatal care and resolve the psychological concerns of patients with adverse antenatal record. Intra-uterine foetal death, pre-term birth, intra-partum foetal death or early neonatal deaths are labelled as previous adverse pregnancy.

Methodology

In this case-control study, multigravida (up to gravida 4) with age between 25 and 40 years, gestational age >18 weeks to <24 weeks, with no chronic medical disorders, such as diabetes and high blood pressure, were included. Pregnant women expecting twins, with past history of mental disorder or family history of mental disorder were excluded from the study. The subjects were recruited from October 2018 to April 2019. This study was approved by ERB of Sheikh Zayed Medical College/Hospital, Rahim Yar Khan.

For sample size estimation, the results of a previous study by Couto et al were used: (frequency of depression 33.3% in control group and 76.7% in patients with previous adverse pregnancy outcome),[8] power of test (1-β) 80.0% and level of significance 5.0%. The sample size in his study was 24 patients in each group.

Our study included a total of 90 pregnant women — 45 pregnant women who had previous adverse antenatal record and 45 women who were pregnant but did not have adverse antenatal record. All the study participants were screened for their medical and clinical history and their routine clinical consultation was performed. Women with previous adverse pregnancy outcomes were invited for voluntary inclusion in this study.

After inclusion, patients' history regarding their demographics, education, residence, and family income was taken. Depression, anxiety and stress scale (DASS) 21 was used to determine anxiety, depression and stress. A questionnaire with seven questions (each carrying 0-3 scale) for each category to diagnose anxiety, depression and stress was used. The final score was calculated by multiplying the score with 2. To determine the quality of life Quality of life scale (QOL) questionnaire with 16 questions was used. Patients were divided in five categories using QOL questions: physical wellbeing, relationship with others, personal activities, personal development and recreational activities. Before filling the questionnaire, the patients were verbally informed about the objectives of the study and how to fill the questionnaire.

Results

Mean age of the patients, living area, and monthly family income was almost the same in cases and controls. There were more illiterate women among the study group 6 (13.3%) as compared to 0 (0.00%) in the control group (p-value 0.009). Rate of previous planned pregnancy was lower in the study group 6 (13.3%) as against 15 (33.3%) among controls (p-value 0.03) (Table-1).

On comparison of QOL between both the groups, physical wellbeing was almost similar. Relationship with others, social activities, personal development, and recreational activities were significantly poor among the study cases as compared to the controls (Table-2).

Anxiety, depression and stress score was also significantly higher among study cases than controls. Extreme anxiety was found in 18 (40%) patients in the study group and in only 3 (6.7%) patients in the control group, severe anxiety was found in 24 (53.3%) study patients as compared to 3 (6.7%) control patients (p-value <0.001). Extreme depression was found in 36 (80%) study patients versus 6

Table-1: Comparison of baseline variables.

	Study Group (N=45)	Control Group (N=45)	P-value
Mean Age (years)	30.13±4.45	30.06±4.83	0.94
Educational Status			
Illiterate	06 (13.3%)	00 (0.0%)	0.009
Primary	21 (46.7%)	18 (40.0%)	
Matriculation	09 (20.0%)	06 (13.3%)	
Inter-mediate or higher level	09 (20.0%)	21 (46.7%)	
Living Area			
Rural	33 (73.3%)	30 (66.7%)	0.49
Urban	12 (26.7%)	15 (33.3%)	
Family Income			
≤20,000 (PKR)	36 (80.0%)	35 (77.8%)	0.79
>20,000 (PKR)	9 (20.0%)	10 (22.2%)	
Previous Pregnancy			
Planned	06 (13.3%)	15 (33.3%)	0.03
Un-planned	39 (86.7%)	30 (66.7%)	

PKR: Pakistani Rupees

Table-2: Comparison of Quality of Life (QOL) between the groups.

QOL	Study Group (N=45)	Control Group (N=45)	P-value
Physical Wellbeing	6.66±1.59	7.13±1.56	0.16
Relationship With Others	13.26±2.54	16.53±2.65	<0.001
Social Activities	5.80±1.23	7.20±0.99	<0.001
Personal Development	11.20±2.98	14.00±2.05	<0.001
Recreational Activities	10.66±2.49	12.73±2.82	<0.001

Table-3: Comparison of anxiety, depression and stress score between the study and control groups.

	Study Group (N=45)	Control Group (N=45)	P-value
Anxiety	27.60±5.53	11.86±7.06	<0.001
Depression	24.13±4.69	11.60±5.68	<0.001
Stress	27.60±4.44	13.06±4.48	<0.001
Level of Anxiety			
Mild	00 (0.0%)	06 (13.3%)	<0.001
Moderate	3 (6.7%)	09 (20.0%)	
Severe	24 (53.3%)	03 (6.7%)	
Extreme	18 (40.0%)	03 (6.7%)	
Level of Depression			
Mild	00 (0.0%)	06 (13.3%)	<0.001
Moderate	03 (6.7%)	18 (40.0%)	
Severe	6 (13.3%)	6 (13.3%)	
Extreme	36 (80.0%)	6 (13.3%)	
Level of Stress			
Mild	00 (0.0%)	03 (6.7%)	<0.001
Moderate	03 (6.7%)	6 (13.3%)	
Severe	36 (80.0%)	00 (0.0%)	
Extreme	03 (6.7%)	00 (0.0%)	

(13.3%) patients in control group, while 6 (13.3%) in each group (p-value <0.001) experienced severe anxiety. Severe stress was found in 36 (80.0%) patients and severe anxiety in 3 (6.7%) patients in the study group, while there was no such patient in the control group (p-value <0.001) (Table-3).

Discussion

Pregnancy is strongly associated with changes in emotional and behavioural patterns. Nearly about 14% to 23% of pregnant women experience some degree of depression at any stage.[12] This depression can reduce the capacity of self-care, inadequate diet intake, drug addiction, and carelessness in antenatal visits. In the present study, the association of previous adverse pregnancy outcome with anxiety, depression, stress and QOL in subsequent pregnancy was evaluated.[12] The study revealed poor QOL, and higher level of anxiety, depression and stress in women with previous adverse antenatal record as compared to the control group.

The present study showed significant association of illiteracy and unplanned pregnancy with adverse pregnancy outcomes. Gravensteren et al also found low educational status as risk factor for adverse pregnancy outcomes.[13]

Cuoto et al compared the QOL, anxiety and depression in women with previous adverse pregnancy outcomes with those of normal outcome, and found poor QOL such as physical functioning, physical role limitations, body pain, general health, vitality, and social functioning in the study group as compared to the control group.[8] They also found higher depression and anxiety in the study patients - 32.5% patients in study and in only 10% in control patients (p-value <0.001), while anxiety was found in 76.7% patients in the study group as compared to in 33.3% in the control group (p-value <0.001).[8] However, these authors used SF-36 QOL questionnaire and hospital depression and anxiety scale while we used DASS21 scale and QOL-16 items questionnaire.

A study by Shapiro et al concluded that previous live birth is associated with lower risk of anxiety in all three-trimesters, while higher level of anxiety was found in the first trimester in women with previous miscarriage and higher anxiety in the third trimester in women with previous still-birth.[14]

Another study by Gravensteen et al compared the anxiety and depression in women with a history of previous still birth with nulliparous women or those having previous live birth. They also found higher level of anxiety and depression in women with previous still birth as compared to women with normal child birth and nulliparous women in first trimester, but in subsequent trimesters there was no significant difference in the incidence of anxiety and depression between the groups.[13]

Armstrong et al conducted a long follow-up study and concluded that the incidence of depression and anxiety was reduced after three to eight months of subsequent normal child birth in women with a previous bad pregnancy experience.[15] While another study by Blackmore et al reported that depression and anxiety persists even after normal pregnancy for up to 33 months in women with previous pre-natal death.[16]

The main limitation of the present study is that it only measured QOL, anxiety and depression in the first trimester and did not follow-up till delivery i.e. during second and third trimester.

Conclusion

Women with previous adverse pregnancy record have poor quality of life, and higher degree of anxiety, depression and stress in subsequent pregnancy as compared to those who had a normal live birth in the previous pregnancy. So, previous pregnancy outcome should be considered along with other psychological variables to develop the conceptual model of anxiety and depression during pregnancy.

Disclaimer: None to declare.

Conflict of Interest: None to declare.

Funding Sources: None to declare.

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