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DEPRESSION AND ANXIETY FOLLOWING EARLY PREGNANCY LOSS – OCCURRENCE AND RISK FACTORS

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Abstract

Early pregnancy loss is associated with various psychological symptoms shortly after the miscarriage which, in some patients, can persist a longer period of time. The main goal of our study is to establish the occurrence-rate and risk factors for development of these symptoms.

Patients with early pregnancy lose, who came in hospital were enrolled in the study. The HADS (Hospital Anxiety and Depression Scale) was used to measure symptoms of depression and/or anxiety of these patients. Chi-square test was used for statistical analysis.

Out of total 70 patients, 60% reported symptoms of depression and/or anxiety at some point during the study. Half of them, i.e. 54.2% display the symptoms on the day of admission to the hospital, while 9.5% of the patients demonstrated onset of symptoms of depression and/or anxiety one month after the incident. The symptoms persisted at least one month following the miscarriage, in 64.3% of the patients.

Regarding the studied variables (nationality, level of education, employment and marital status as well as number of previous pregnancy loss and the number of children), none of them shows statistically significant difference for developing symptoms of depression and/or anxiety.

60% of women display symptoms of anxiety or/and depression following early pregnancy loss, majority of them immediate after the incident, so every hospital should be well-staffed by professionals and able to provide an adequate care and psychological support for these patients.

The study failed to reveal any risk factor (among selected) significantly associated with development of symptoms of depression and anxiety. Hence, every woman with such diagnosis can potentially develop psychological stress, and should be monitored carefully.

Keywords: anxiety; depression; early pregnancy loss; HADS

Introduction

Miscarriage is defined as a pregnancy ending before the fetus becomes capable of independent life outside of the womb. The cut-off regarding the gestational age of the fetus depends on the level of development of the neonatal care units of the country.

Therefore, in less developed countries, miscarriage is defined as a pregnancy loss prior to 22 weeks of gestation, while as in more developed countries (such as the USA), it is considered prior to 20 weeks of gestation. It is estimated that 16,5% of all the pregnancies in the USA result in miscarriage [1].

Data from the Early Childhood Longitudinal Study, Birth Cohort found that 25% of women in the USA had a pregnancy loss of some type prior to the birth studied [2].

Early pregnancy loss, as a subtype of miscarriage, is defined as a nonviable, intrauterine pregnancy with either an empty gestational sac or a gestational sac containing an embryo or fetus without fetal heart activity within the first 12 6/7 weeks of gestation [3].

Emerging evidence has suggested that miscarriage could be associated with significant and possibly enduring psychological consequences. As many as 50% of miscarrying women suffer some form of psychological disturbance in the weeks and months after loss.

About 40% of miscarrying women were found to be suffering from symptoms of grief shortly after miscarriage, and in some symptoms persisted for a longer period of time. Elevated common, and major depressive disorder has been reported in 10-50% after miscarriage. Psychological symptoms could persist for 6 months to 1 year after miscarriage [4].

One of the reasons for the appearance of psychological symptoms after a miscarriage is the fact that it is a sudden and abrupt event, and hence prevents anticipatory psychological preparation for the loss. Furthermore, the woman usually does not experience the fetus as a separate person, but rather as a part of herself, and therefore the challenge of mourning the loss of a part of her can be particularly difficult.

The loss is often "invisible" and is not marked by a funeral ceremony or associated with established mourning rituals such as sharing memories with loved ones. Additionally, the loss goes largely unrecognized by other family members and the community.

Although in the past it was assumed that maternal grief after a miscarriage is minor and transitory, studies have now documented is as substantial as that following the loss of a loved one. The main symptoms noted are sadness, yearning for the lost child, a desire to talk about the loss and a search for a meaningful explanation of the loss [5].

It is reported in the literature that about 40% of miscarrying women were suffering from symptoms of grief shortly after miscarriage [6].

Materials and methods

Considering the fact that there is little information in our country regarding this topic, we have decided to conduct a research in this regard.

Materials: Patients admitted to the Specialized hospital for gynecology and obstetrics “Mother Teresa” Skopje, who were diagnosed with early pregnancy loss.

- Inclusion criteria: Early pregnancy loss, patients older than 18 years old, patient consent to participate in the study.
- Exclusive criteria: incomplete database, drop out, history of previous psychiatric diagnosis, current psychiatric therapy.
- Methodology: Prospective observational study.

The data were collected through HADS questionnaire, completed during admission to the hospital and one month afterwards.

The HADS questionnaire was developed by Zigmond and Snaith in 1983. Its purpose is to provide clinicians with a practical and reliable tool for identifying and quantifying depression and anxiety. It is a self-assessment questionnaire that takes approximately 10 minutes to complete.

The patients should choose the answer that most closely describes how they felt during the past week. The questionnaire consists of 14 questions, 7 of which are related to anxiety and the remaining 7 to depression. The answers are on a Likert-type scale ranging from 0 to 3, with a minimum score of 0 or a maximum score of 21 for each subscale.

A score of 0 to 7 indicates absence of clinically significant anxiety and/or depression, a score of 8 to 10 indicates borderline case, while a score of 11 to 21 indicates presence of relevant symptomatology and a probable case of anxiety and/or depression (appendix 1).

Variables that were included in the study: age, nationality, level of education, employment status, marital status, number of pregnancies, number of previous pregnancy losses, number of children. Qualitative variables were analyzed by using chi-square and 95% confidence interval (CI).

Results

A total of 80 patients were asked to fill in the HADS questionnaire on the day of admission to the hospital and one month later. Ten patients were excluded from the study due to an exclusion criterion. Out of the remaining 70 patients, 60% showed symptoms of depression and/or anxiety at some point during the study.

On the day of admission to the hospital, 38 patients (54.2%) showed symptoms of depression and/or anxiety, of which 4 patients (10.52%) showed symptoms of depression, 17 patients (44.74%) showed symptoms of anxiety, and 17 patients (44.74%) showed mixed symptoms of depression and anxiety. (Fig.1.)

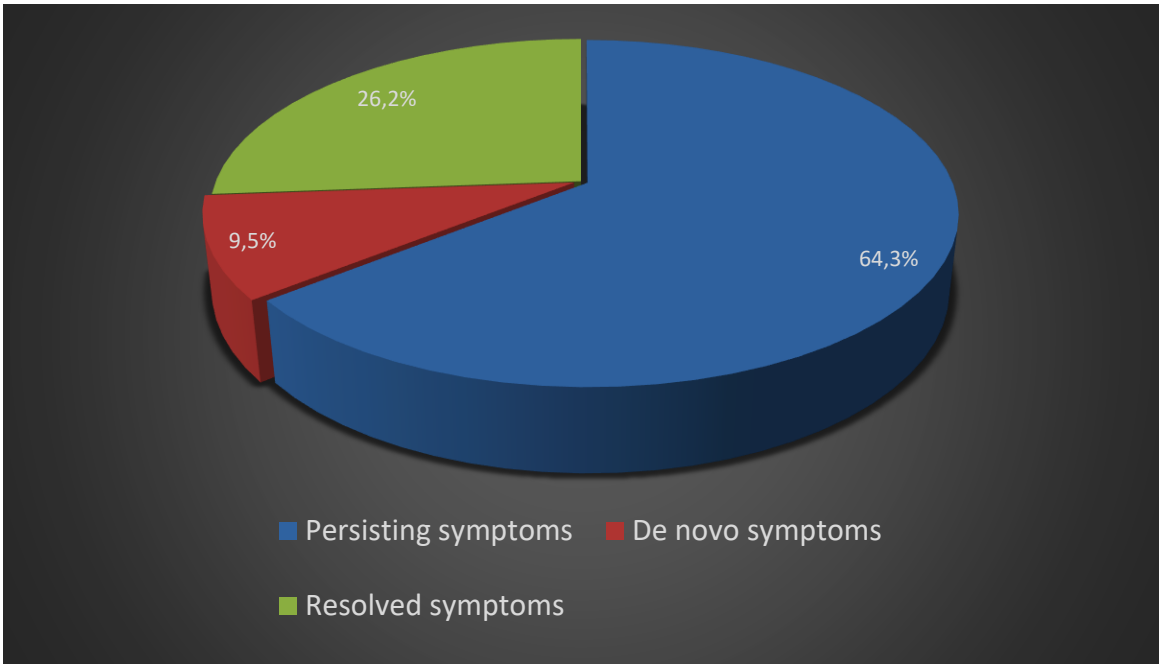

Fig 1. Symptoms of depression and/or anxiety at the day of admission

One month following the miscarriage, symptoms of depression and/or anxiety persisted in 64.3%, i.e., 27 patients, while as 11 patients reported resolution of the symptoms. At this point of the study, 4 patients, which showed no symptoms at the day of admission, demonstrated onset of symptoms of depression and/or anxiety. (Fig.2.)

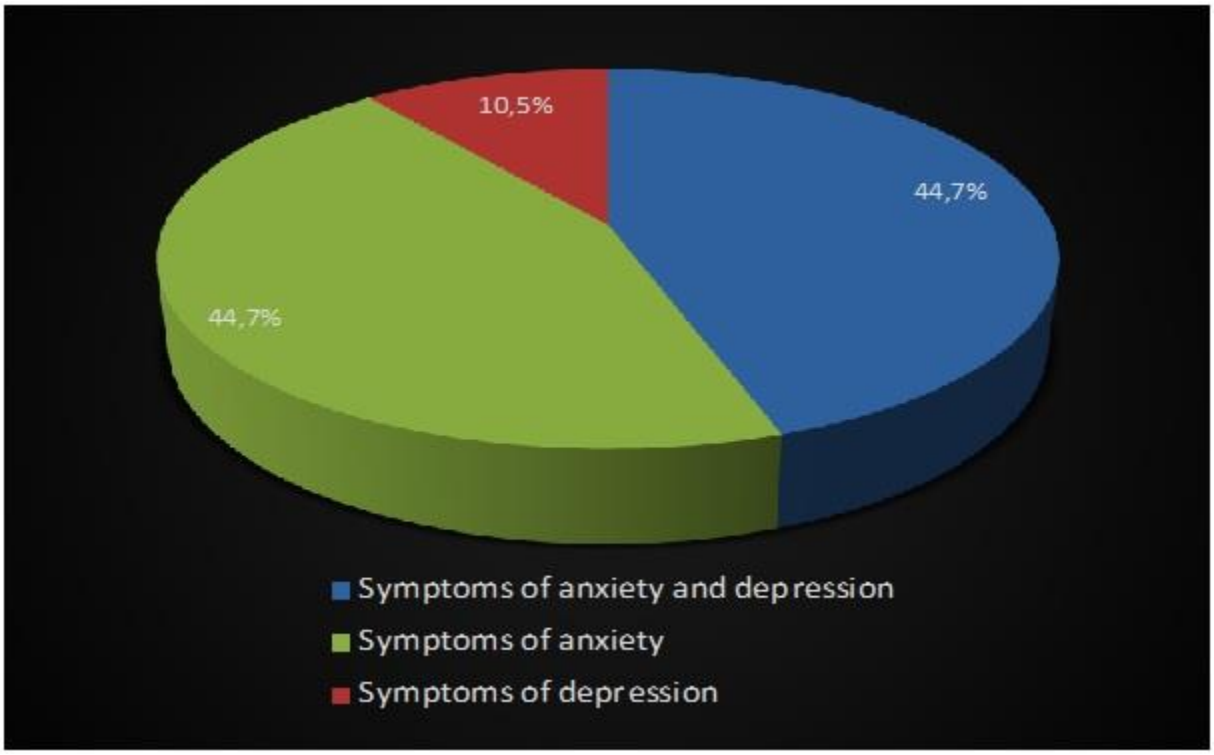

Fig 2. Occurrence of symptoms of depression and/or anxiety one month following the miscarriage

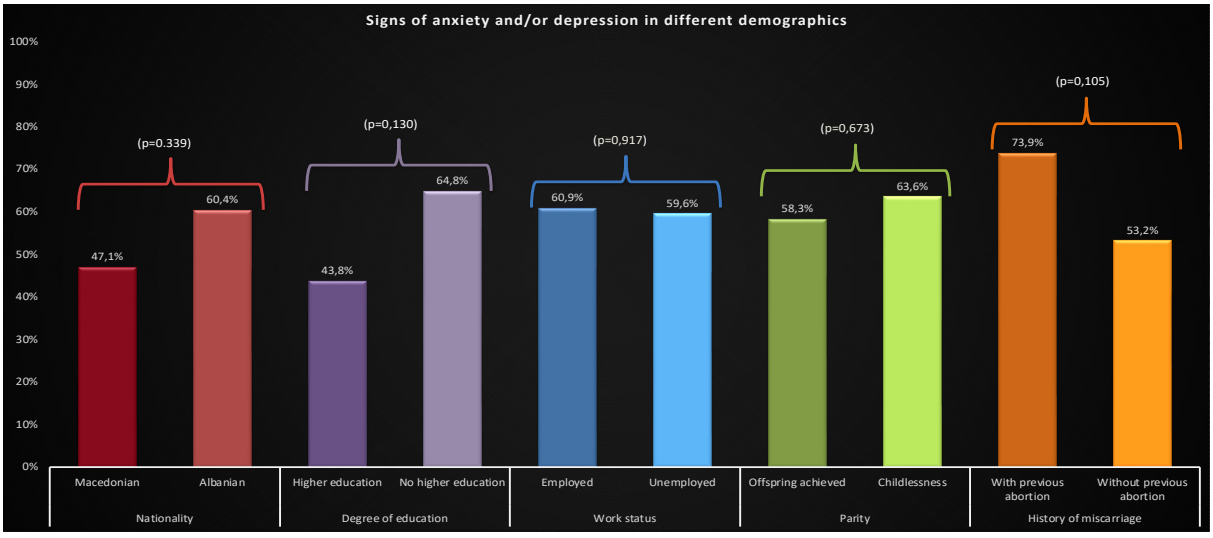

Fig. 3. Studied variables in correlation with development of symptoms of depression and/or anxiety

The second part of the study included analyses of the association of development of symptoms of depression and/or anxiety with the following variables: nationality, level of education, employment status, number of pregnancies, number of previous pregnancy losses and number of children.

Based on nationality as a variable, the following results were acquired: 47% of the Macedonian patients and 60.4% of the Albanian patients showed signs of depression and/or anxiety. The difference between these two groups - based on their nationality - did not show a statistical significance for the occurrence of depression and/or anxiety (p=0.339).

The level of education of the patients was analyzed as well. 22.8% of the patients had higher education, while 77.1% of the patients did not. Out of the patients who had completed higher education, 43.7% showed symptoms of depression and/or anxiety, opposed to 64.8% of those who have completed primary and secondary education only. The result is not statistically significant (p=0,130).

Regarding the employment status, 32.8% of the patients were employed, while 61.2% were unemployed. 60.8% of the employed patients and 59.5% of the unemployed patients showed symptoms of depression and/or anxiety. There is no statistical significance in the occurrence of depression and/or anxiety between the two groups based on their employment status (p=0,917).

Analyses of parity as a variable in the occurrence of depression and/or anxiety showed the following results: 58.3% of the patients who have children and 63.6% of the childless patients have symptoms of depression and/or anxiety. The difference between these two groups is not statistically significant (p=0,673). Out of the pool of patients with a history of previous miscarriage, 73.9% showed symptoms of depression and/or anxiety, opposed to 53.1% of the patients without a bad obstetric history. The results did not show a statistical significance in the difference between the two groups regarding this variable (p=0,105). (Fig. 3.)

Discussion

Among the women who were interviewed, 60% manifested symptoms of anxiety and/or depression, i.e. 42 out of 70 were HADS positive.

More than every other woman will develop symptoms of depression and/or anxiety following an early pregnancy loss. In 4 out of 5 patients, symptoms of depression and/or anxiety persist one month after the pregnancy loss.

Nevertheless, patients that do not show symptoms at admission, may develop symptoms later, which is why it is important to provide adequate professional help for all patients going through a pregnancy loss, both during their admission to the hospital, and after discharge.

In comparison with our study, Neugebauer et Al documented that 36% of the patients show moderate to severe symptoms of depression in the first weeks after the loss, which is 3.4 times more frequent when compared to the percentage of pregnant women who were interviewed, and 4.3 times more frequent than among women without any recent pregnancy loss. Six weeks and six months after the loss, the symptoms of depression were 2.6 and 3.0 times higher than among the previously mentioned groups of women interviewed, respectively [7].

The study shows that women of both Macedonian and Albanian nationalities are equally affected in developing symptoms of anxiety/depression, which leads to a conclusion that there is no difference in the “grief” in terms of religion and nationality.

Even though we expected highly educated women to demonstrate a higher risk of developing anxiety and/or depression, the results showed that both groups were equally affected.

From the study we also concluded that work status does not affect the risk of anxiety/depression occurrence [8].

Predisposing risk factors among patients who suffered pregnancy loss that lead to higher occurrence of psychological morbidity are childlessness and a history of previous miscarriage. Our study does not confirm this.

Among the interviewed patients with no children, 63.6% manifest symptoms of anxiety/depression, and a high percentage of 58.3% of the patients who have took on the role as a mother are also HADS positive. Compared to the previous study, we have excluded childlessness as a predisposing risk factor for the occurrence of a psychological disorder.

Several studies have shown that a bad obstetric history is a predisposing factor for occurrence of symptoms of anxiety and depression [9]. However, our study did not confirm this. Among the patients with a history of previous pregnancy loss, 73.9% showed signs of anxiety and/or depression, and among those without a bad obstetric history, 53.1% have manifested the same symptoms. The difference between them is not statistically significant.

Conclusion

Early pregnancy loss is associated with a high rate of occurrence of symptoms of anxiety and/or depression. Most patients manifest the symptoms immediately after the diagnosis, but there are also patients who will manifest symptoms later.

There are no risk factors that predispose the occurrence of psychological morbidity.

All patients are potential "candidates" for developing depression and/or anxiety, regardless of their nationality, level of education, employment status, parity as well as history of previous pregnancy loss. Therefore, it is necessary to respond according to the now-and-immediately-principle, having in mind that patients may develop symptoms later, i.e. all should be provided with appropriate professional help and care in the very same hospital where they were admitted for treatment, as well as after discharge.

Conflict of interest statement. None declared.

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Hospital Anxiety and Depression Scale (HADS)

Tick the box beside the reply that is closest to how you have been feeling in the past week.
Don't take too long over you replies: your immediate is best.

D	A		D	A	
		I feel tense or 'wound up':			**I feel as if I am slowed down:**
	3	Most of the time	3		Nearly all the time
	2	A lot of the time	2		Very often
	1	From time to time, occasionally	1		Sometimes
	0	Not at all	0		Not at all
		I still enjoy the things I used to enjoy:			**I get a sort of frightened feeling like 'butterflies' in the stomach:**
0		Definitely as much		0	Not at all
1		Not quite so much		1	Occasionally
2		Only a little		2	Quite Often
3		Hardly at all		3	Very Often
		I get a sort of frightened feeling as if something awful is about to happen:			**I have lost interest in my appearance:**
	3	Very definitely and quite badly	3		Definitely
	2	Yes, but not too badly	2		I don't take as much care as I should
	1	A little, but it doesn't worry me	1		I may not take quite as much care
	0	Not at all	0		I take just as much care as ever
		I can laugh and see the funny side of things:			**I feel restless as I have to be on the move:**
0		As much as I always could		3	Very much indeed
1		Not quite so much now		2	Quite a lot
2		Definitely not so much now		1	Not very much
3		Not at all		0	Not at all
		Worrying thoughts go through my mind:			**I look forward with enjoyment to things:**
	3	A great deal of the time	0		As much as I ever did
	2	A lot of the time	1		Rather less than I used to
	1	From time to time, but not too often	2		Definitely less than I used to
	0	Only occasionally	3		Hardly at all
		I feel cheerful:			**I get sudden feelings of panic:**
3		Not at all		3	Very often indeed
2		Not often		2	Quite often
1		Sometimes		1	Not very often
0		Most of the time		0	Not at all
		I can sit at ease and feel relaxed:			**I can enjoy a good book or radio or TV program:**
	0	Definitely	0		Often
	1	Usually	1		Sometimes
	2	Not Often	2		Not often
	3	Not at all	3		Very seldom

Please check you have answered all the questions

Scoring:
Total score: Depression (D) _____ Anxiety (A) _____
0-7 = Normal
8-10 = Borderline abnormal (borderline case)
11-21 = Abnormal (case)