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ANALYSIS OF STRESS AND DEPRESSION DURING PREGNANCY IN PAKISTAN

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Abstract:
Introduction: *Pregnancy and the postpartum can be times of joy and positive expectations but also of stress and difficulties.* ***Aims and objectives:*** *The main objective of the study is to analyse the stress and depression during pregnancy in Pakistan.* ***Material and methods:*** *This descriptive study was conducted in Sir Ganga Ram Hospital, Lahore during June 2019 to January 2020.This study was done with the permission of ethical committee of hospital. Data were collected from 100 pregnant female patients.* ***Results:*** *The data was collected from 100 female patients. The mean maternal age of study and control groups were 28.4±5.5 and 29.4±5.7 years, respectively. Median gestational age of study participants was 11.1±2.1 weeks and 10.9±2.2 weeks for controls. No statistically significant difference was observed between the study and control groups. If the diagnosis of NVP or HG is made, but there is poor response to initial interventions, an atypical presentation, or initial presentation after 9–10 weeks, other causes must be explored. If there is fever, a source of infection should be sought or if the history suggests a CNS abnormality, check for signs of raised intracranial pressure.* ***Conclusion:*** *It is concluded that pregnancy is a time of increased vulnerability for the development of anxiety and mood disorders. Some women may experience their first depressive episode during pregnancy, while others are at risk of recurrence due to a previous history of depression and anxiety.*

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INTRODUCTION:

Pregnancy and the postpartum can be times of joy and positive expectations but also of stress and difficulties. Pregnancy and delivery bring many physiological and psychosocial changes, and both mothers and fathers are required to face several new challenges during this period. Consequently, pregnancy and the post partum are times of increased vulnerability for the onset or relapse of a mental illness. Pregnant women with severe nausea and vomiting may have hyperemesis gravidarum (HG), a separate entity from nausea and vomiting of pregnancy (NVP), which if left untreated may lead to increased maternal and fetal morbidity. HG is infrequent when compared with NVP and occurs in 0.3%–2% of all pregnancies. The severity of complaints might vary from one pregnant woman to another and even between pregnancies of the same woman, which suggest the contribution of genetic, biological, and psychological factors[1].

In addition to the physical condition of pregnancy, NVP and HG also negatively affect the mental health, quality of life, and functional capacity of women. In severe cases, fetal development might also be affected[2]. Although there are still questions regarding the exact cause of both conditions, it does appear to be associated with various metabolic and endocrine factors[3]. In this context, the most implicated factor is suggested to be the production of the human chorionic gonadotropin hormone. Moreover, there is evidence that links this condition to alternation in a variety of hormones, including estrogen, progesterone, placental prostaglandin E2, and thyroid-stimulating hormone[4].

Nausea and vomiting in pregnancy (NVP) has for a long time fascinated the scientific community for two main reasons: its high prevalence, which has rendered it into one of the symptoms of early pregnancy and its great symptom variability, from early physiological nausea of pregnancy to a more severe condition, which may result even in maternal death at its worst form. NVP affects 50–90% of pregnant women[5]. Symptoms begin early in the first trimester, peak at around nine gestational weeks (GW) and typically cease at GW 20[4]. In 0.3–2.3% of cases it progresses to the more severe condition hyperemesis gravidarum (HG) and in 5–22% of affected women the symptoms persist throughout pregnancy[6]. WHO defines HG as NVP starting before 22 GW but the duration of symptoms and the time-point of symptom ceasing are not noted. The vast majority of published studies focus on HG, the most severe form of NVP requiring hospitalisation and/or parenteral nutrition[7].

Aims and objectives

The main objective of the study is to analyse the stress and depression during pregnancy in Pakistan

MATERIAL AND METHODS:

This cross sectional study was conducted in Sir Ganga Ram Hospital, Lahore during June 2019 to January 2020. This study was done with the permission of ethical committee of hospital. Data were collected from 100 pregnant female patients.

Data collection

Participants were selected through randomly sampling technique. All the data were collected through a questionnaire. The data was divided into two groups, one was control group and one was selected patients. We compare the selected patients with control group. After inclusion, gestational age was determined according to the first day of last menstruation corrected by ultrasound finding when the discrepancy exceeded one week. A detailed socio-demographic data form was given to all subjects. Pregnancy characteristics, age, medication history, tobacco and alcohol use, and educational and familial status were recorded.

Statistical analysis

The data was collected and analysed using SPSS version 21.0. Student's t-test was used to compare the data that was normally distributed. Data non-normally distributed were compared using the Mann–Whitney U test.

RESULTS:

The data was collected from 100 female patients. The mean maternal age of study and control groups were 28.4±5.5 and 29.4±5.7 years, respectively. Median gestational age of study participants was 11.1±2.1 weeks and 10.9±2.2 weeks for controls. No statistically significant difference was observed between the study and control groups in terms of maternal and gestational age, gravidity, parity, abortus, occupation, housing, and education levels. Only nine women in the NVP group reported a history of cigarette smoking before pregnancy, which was statistically insignificant between groups.

Table 01: Socio-demographic characteristics of study participants

		NVP patients	Controls	p
Age (years)		28.4±5.5	29.4±5.7	NS
Gestational age (weeks)		11.1±2.1	10.9±2.2	NS
BAI		13 (0–43)	4 (0–26)	<0.001
EPDS		7 (0–20)	4 (0–16)	NS
Gravida		2 (1–7)	2 (1–5)	NS
Education				NS
	Illiterate (%)	5 (6.0)	4 (4.8)	
	Primary (%)	22 (26.5)	13 (15.6)	
	High (%)	32 (38.5)	36 (43.3)	
	University (%)	24 (29.0)	30 (36.3)	
Cigarette smoking				NS
	No (%)	74 (89.1)	70 (84.3)	
	Yes (%)	9 (10.9)	13 (15.7)	

If the diagnosis of NVP or HG is made, but there is poor response to initial interventions, an atypical presentation, or initial presentation after 9–10 weeks, other causes must be explored. Table 02 lists other potential causes of nausea and vomiting in pregnancy. If there is fever, a source of infection should be sought or if the history suggests a CNS abnormality, check for signs of raised intracranial pressure.

Table 02: Differential diagnosis of NVP

Peptic ulcer	Urinary tract infection
Hepatitis	CNS abnormality
Pyelonephritis	Preeclampsia
Pancreatitis	Acute fatty liver of pregnancy
Cholecystitis	Gastroesophageal reflux disease
Appendicitis	Mallory-Weiss tear
Gastroenteritis	Hyperthyroidism
H. pylori infection	

DISCUSSION:

Prolonged nausea and vomiting in the setting of NVP or HG can lead to maternal vitamin deficiencies. As mentioned above, Wernicke's encephalopathy is a potential serious or fatal maternal complication and is due to severe vitamin B1 (thiamine) deficiency[8]. Approximately 47% of patients with this condition will present with a history of prolonged nausea and vomiting along with the triad of abnormal ocular movements, ataxia, and confusion; an additional percentage will also have diplopia[9]. Symptoms can also be more variable and include memory loss, apathy, decreased level of consciousness, or blurred vision. Although this condition is reversible with prompt treatment, 60% of women will have residual impairment and there is a 37% fetal loss rate[10]. Because maternal serum thiamine levels are not useful in making the diagnosis, any pregnant woman who presents with prolonged nausea and vomiting and neurologic abnormalities should be empirically treated with intravenous thiamine[11].

CONCLUSION:

It is concluded that pregnancy is a time of increased vulnerability for the development of anxiety and mood disorders. Some women may experience their first depressive episode during pregnancy, while others are at risk of recurrence due to a previous history of depression and anxiety.

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