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Original

Prevalence of postpartum depression in patients with migraine

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Abstract

Introduction

Migraine is a frequent and chronic condition that affects 3 times more women than men. Overall, it shows that migraine is influenced by variables such as fluctuating hormones levels throughout life with migraine. Women can also experience symptoms of postpartum depression (PPD) which can cause issues for new moms in terms of behavior, emotion and cognition. Clinical investigations have shown that headaches affects pregnants and parturients.

Objective

To verify PPD in migraine and non-migrainous parturients.

Methods

Data was collected from a sample of 155 women over 18 years old in the obstetric center of Santa Casa de Misericórdia de Barbacena, from October 2021 to August 2022, in the first 24 hours after labor. Parturients who did not agree to participate and those with cognitive impairment were excluded. All patients signed an informed consent form and answered the Edinburgh Postnatal Depression Scale (EPDS) and the ID-MigraineTM, in addition to clinic data and concomitant disorders from the patient's record.

Results

25 of the 155 postpartum women achieved the criteria for migraine and 130 for non-migraine. Of the patients with postpartum depression associated with migraine, 4 were classified as migraine and 8 as non-migrainous. Among patients who had headaches during pregnancy, 11 had PPD compared to those who did not have headaches during pregnancy: 1. The OR=8.9 (CI 1.12-70) and RR=7.9 (CI 1.05-60) were higher compared to those who did not have PPD. The analysis did not find a relation between migraine and PPD. However, a relation was found between headaches during pregnancy and the presence of PPD ($p<0.05$).

Conclusion

Patients who experienced headaches while pregnant are more likely to have postpartum depression. However, migraine-diagnosed puerperal women do not present considerable concerns for the development of depression.

Keywords:
Migraine
Headache
Postpartum depression
Pregnancy

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Introduction

Migraine is a frequent and chronic condition that is often characterized by debilitating attacks of headache and secondary symptoms, such as aura.[1] It is a disorder that effects on how the central nervous system works.[2] According to epidemiological studies, migraine is known as the third most prevalent condition in the world.[3]

There are two categories for migraine. A clinical disease known as migraine without aura is commonly intercorrelated with specific features and symptoms while a transient focal neurological symptoms that typically precede or follow the headache is known as migraine with aura.[4]

One-fourth of women in reproductive age is affected by migraine, which is three times more common than men.[5] Moreover women are more likely to have depressive disorder than men are. A significant role of sex hormones indicates a higher possibility of development of both conditions during their reproductive years.[6] After menarche, the number of women with migraine is higher than the number of men with the same condition with emphasis on menstrual cycles.[7]

A significant event in a woman life as childbirth can have its problems such as signs of postpartum depression (PPD). A psychiatric illness called PPD reflects the mother's role. As a result, it is has harmful effects on both them and their child. Risk factors for PPD includes cognitive impairment, emotional distress and behavioral issues.[8]

According to clinical studies, headaches have an impact on women that are pregnant or that recently just gave birth. In fact, the vast majority of the time, pregnancy-related migraine symptoms get better on their own.[9] It is known that migraineurs have anxiety and depressive disorders two to ten times more frequently than the general population.[10] Therefore, it can be a risk for postpartum depression development.

Methods

Study/Population Design

This research is a cross-sectional study on the presence of postpartum depression in migraine patients.

Parturient women over 18 years of age, recruited consecutively by convenience in the Obstetric Center of Santa Casa de Misericórdia de Barbacena, from October 2021 to August 2022, were included in the study. Parturients with cognitive deficits that made it impossible to answer the questionnaires and those who did not agree to participate in the study were excluded.

Sample calculus

Data was collected from a sample of 155 women, older than 18 years old, in the obstetric center of Santa Casa de Misericórdia de Barbacena, between October 2021 and August 2022, in the first 24 hours after labor by the members of the research. Clinic and concomitant disorders were collected from the patient's record. Parturients who did not agree to participate in the study and those with cognitive impairment were excluded.

Assessments/Questionnaires

All the patients, regardless of the type of delivery, were invited to participate in the study and signed an informed consent form to participate in the study.

All were interviewed within the first 24 hours postpartum. The diagnosis of migraine, made by the research team members, was made according to the ID-MigraineTM criteria and the participants were divided into two groups: a group of migrainous patients; and another group of non-migrainous patients.

All the patients answered the Edinburgh Postnatal Depression Scale (EPDS) and the ID-MigraineTM.

The EPDS was developed by Cox et al.[10] in 1987 to identify postpartum depression in clinical environments and researches. It is a 10-question scale with a score to previously available scales (Depression, Anxiety and Stress Scale; Hospital Anxiety and Depression Scale - HADS; and Depression and Anxiety Scale).

The scale was initially compared with the Research Diagnostic Criteria (RDC). The use of EPDS is favored by the ease and speed of its administration. This has led to its use by health professionals in community studies, especially for the investigation of potential cases of depression. The clinical and epidemiological value of the scale has been confirmed by several validation studies conducted in different countries, with sensitivity and specificity in the range of 70-85%, depending on the cut-off point aspects.

Statistical analysis

The data from the applied questionnaires were transcribed into a spreadsheet and processed in statistical software STATA v 9.2. The relative and absolute distributions of qualitative variables were calculated, as well as the central tendency measures of position and dispersion of quantitative variables. The existence of a relationship between the variables studied was measured by the chi-square and Fischer's exact tests. The existence of a relationship between qualitative and quantitative variables was measured by T-Student test, ANOVA, Mann-Whitney's or Kruskal-Wallis U-test as indicated. Statistically significant differences were considered those whose p value was less than 0.05.

The comparison between the groups, considering a difference of 5 points in the mean of the impulsiveness scale when comparing the groups (65,70) with standard deviation 10.0 in each group 95% significance level defines a sample power of 84.09%.

Results and Discussion

Based on the sample of 155 postpartum women, 25 (16.13%) achieved the criteria for migraine and 130 (83.87%) for non-migraine. Of the patients with postpartum depression associated with migraine, 4 (16%) were classified as migraine and 8 (16%) as non-migraine. (Table 1).

Table 1. Prevalence of PPD in patients with and without migraine

Migraine	Patients without PPD	Patients with PPD	TOTAL
Migraine	21	4	25
Non-Migrainous	22	8	130
Total	143	12	155

On the other hand, among the patients who had headache during pregnancy, 11 (12.22%) had postpartum depression compared to those who did not have headache during pregnancy: 1 (1.54%) (Table 2).

Table 2. Prevalence of PPD in patients with and without headache during pregnancy

Headache during pregnancy	Patients with PPD	Patients without PPD	TOTAL
Yes	11	79	90
No	1	64	65
TOTAL	12	143	155

In those patients, the OR (OR = 8.9, CI 1.12 - 70) and RR (RR = 7.9, CI 1.05 - 60) were significantly higher compared to those who did not have postpartum depression. The analysis did not find a relation between migraine and postpartum depression. However, a relation between headache during pregnancy and the presence of postpartum depression ($p<0.05$) was noticed.

Puerperal women diagnosed with migraine do not present significant risks for the development of depression. However, patients who had headache during pregnancy have bigger risk of developing postpartum depression. This finding can contribute to recognize postpartum depression in pregnant women, as well as early screening of depression symptoms in puerperium.

Conflict of interest

All authors declare that they have no conflicts of interest.

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Authors contribution:

ACSSR, ALRG, BORS, JMPS, LAGCDC, conception, analyzing the data, final approval; MEJ, professor adviser to the conception of the work studying the interpretation and data of the work. As well, in drafting the work and revising it critically for important intellectual content. Worked on the final approval of the version to be published.

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