Özgün Araştırma Original Article

Jinekoloji - Obstetrik ve Neonatoloji Tıp Dergisi
The Journal of Gynecology - Obstetrics and Neonatology

Frequency Of Headache Among Women In The Outpatient Clinics Of Gynecology And Obstetrics

Gebe ve Jinekoloji Polikliniklerine Başvuran Kadınlarda Baş Ağrısı Sıklığı

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ÖZET

Amaç: Çeşitli nedenlerle jinekoloji ve gebe polikliniklerine başvuran kadınlarda baş ağrısının tipini, sıklığını ve baş ağrısı tipi ile jinekolojik veya obstetric tanı arasındaki muhtemel birlikteliği değerlendirmek.

Gereç ve Yöntemler: Bu çalışma jinekoloji ve gebe polikliniklerine başvuran hastalarda yapılmıştır. Sosyodemografik veriler, jinekolojik ve obstetrik tanı, baş ağrısının varlığı yüzyüze görüşme esnasında yapılandırılmış anket formu ile değerlendirilmiştir. Baş ağrısı olan hastalarda, baş ağrısının özellikleri Uluslararası Başağrısı Hastalıkları Sınıflandırması Beta Sürüm-3 kriterlerine gore değerlendirilmiş ve migren, gerilim veya diğer başağrısı tiplerinin klinik tanısı bu kriterlere göre konmuştur.

Bulgular: Çalışmaya kayıtlı 205 hastanın 170'inde baş ağrısı vardı. Baş ağrısı olan hastaların %60'ında migren, %31.2'inde gerilim tipi başağrısı, %8.8'inde ise diğer baş ağrısı tipleri vardı. Baş ağrısı tipleri ile jinekolojik ve/veya obstetric hastalıklar arasında istatistiki olarak anlamlı bir birliktelik yoktu. Ancak migrenli hastalarda, gebelik, pelvik ağrı ve anormal uterin kanama en sık rastlanan obstetrik ve jinekolojik tanıydı. Gerilim tipi baş ağrısı en sık anormal uterin kanaması olan hastalarda bulunmuştur fakat istatistiki olarak anlamlı değildir ($p>0.05$).

Sonuç: Baş ağrısı jinekolojik ve/veya obstetrik hastalıklarla birlikte bulunan yaygın bir problemdir. Çünkü baş ağrısı şikayeti olan hastaların çoğu tanı ve tedavi almamıştır. Baş ağrısı olan hastaların sorgulanması, özellikle potansiyel tehlikelere neden olabilecek gebe ve postpartum hastalarda, sekonder baş ağrısı ile ayırım yapılmasında önemlidir.

Anahtar Kelimeler: Baş ağrısı sıklığı, kadın, jinekoloji ve gebe poliklinikleri

ABSTRACT

Aim: To evaluate the frequency andtypes of headaches in women presenting to outpatient clinics of Gynecology and Obstetrics with various problems, and to further analyze the possible association between headache types and gynecologic or obstetric diagnosis.

Material and Methods: Patients presented to Gynecology and Obstetrics outpatient clinics were enrolled the study. Socio-demographic data, obstetric and/or gynecologic diagnosis, existence of headache were assessed in a face-to-face interview with a structured questionnaire. Among the patients with headache, the characteristics of headache was interviewed with a symptom checklist based on a semi-structured diagnostic headache evaluation, according to criteria of the International Classification of Headache Disorders beta version-3 , and assigned them a clinical diagnosis of migraine, tension-type or other headaches.

Results: 205 patients were enrolled the study and 170 patients had headache. Among these, 60.0% had migraine, 31.2% had tension-type headache , 8.8% had other types of headaches. There were no statistically significant association between headache types and gynecological and/or obstetric diseases. However, pregnancy, pelvic pain, and abnormal uterine bleeding were the most frequent obstetric and gynecological diagnosis, respectively, in patients with migraine. Tension-type headache frequency was found to be higher in patients with abnormal uterine bleeding, but this increased frequency showed no statistical significance ($p>0.05$).

Conclusion: Headache is a common comorbid problem accompanying gynecologic and/or obstetric diseases. Since most of the patients with headache complaint had no diagnosis and treatment, it is important to question headache among women, in order to differentiate the possible secondary headaches which can be potential danger particularly in women with pregnancy or postpartum period.

Key Words: Headache frequency, women, gynecology and obstetrics outpatient clinics.

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Geliş Tarihi/ Received: 13.05.2015
Kabul Tarihi/ Accepted: 30.05. 2015

Introduction

Headache is one of the most common complaints affecting various age groups. It is among the most frequent problems encountered approximately 25 % in neurology outtpatient clinics (1). A previous study evaluating the burden of headache in Turkey revealed that 66.4 % of the patients who admitted to the neurology outpatient clinics reported headache, and in 35.1 %, headache was the primary cause for admitting to the neurology outpatient clinics (2).

As it is a common complaint of general population, previous epidemiologic studies revealed that 95 % of young women and 91 % of young men experienced headache during a 12-month period; 18 % of these women and 15 % of these men consulted a physician because of their headache (3). Since, there is a women tendency in many of the headache disorders such as migraine, tension-type headache (TTH), substantial research has emerged in the recent years highlighting sex differences in the epidemiology and characteristics of various headache disorders (4). On this aspect, major contributor of headache tendency in women is reported as sex hormones with previous studies. Although, this relationship of headache and sex hormones is frequently demonstrated in migraine, the exact pathophysiology of this association has not yet been fully elucidated (4, 5). Varying estrogen levels regarding to different phases of menstrual cycle are thought to be in charge of headache in migraine, by exerting a nitroglycerin induced activation of nucleus trigeminalis caudalis of the brainstem, as well as the paraventricular nucleus and supraoptic nucleus of the hypothalamus (6, 7).

Since female sex hormones play an important role in common primary headache disorders such as migraine and others, we aimed to evaluate the frequency and types of headaches in women presenting to the outpatient clinics of Gynecology and Obstetrics with various problems and to further analyze the possible association between headache types and gynecologic or obstetric diagnosis.

Material and Methods

Patients presented to the Gynecology and Obstetrics outpatient clinics of our university and Duzce Ataturk State Hospital between November 2013 and May 2014 were enrolled the study. Patients who are not capable to communicate or unwilling to enter the study were excluded. All patients were informed about the content of the study and gave their written approval before enrollment. Local ethics committee has approved the study.

Socio-demographic characteristics with their Gynecological and /or obstetric diagnosis, and medical histories were obtained in a structured interview using an open questionnaire completed in person with all participants. During this face-to-face interview, all patients were questioned whether they have headache complaint or not. Among the patients with headache complaint, the characteristics of headache was interviewed with a symptom checklist based on a semi-structured diagnostic headache evaluation, according to criteria of the International Classification of Headache Disorders beta version-3(ICHD-ß3), and assigned them a clinical diagnosis of migraine, tension-type or other headaches (8). Prior headache diagnoses were also recorded.

Data were summarized by mean±standard deviation or median for continuous variables, and n (%) for categorical variables. Chi-square test was used to analyze association between groups. Statistical analyses were performed with PASW (Predictive Analytics Software is a registered trademark of SPSS Inc. Released 2009, Chicago, USA.) version 18 statistical package, and p values <0.05 were considered statistically significant.

Results

Two hundred and five female patients were enrolled the study. Thirty-five of these patients who did not fulfill the questionnaires appropriately disallowing an accurate diagnosis or without headache were excluded from the study. Among 170 patients with headache, the mean age of the patients were 30.89±11.11 years (range: 15-65 years). The obstetric and gynecological complaints of the patients were pregnancy (n=41, 24.1%), pelvic pain (n=40, 23.5%), abnormal uterine bleeding (n=42, 24.7%), vaginitis (n=16, 9.4%), cystitis (n=4, 2.4%), anemia (n=5, 2.9%), dysmenorrhea (n=3, 1.8%), endometriosis (n=1, 0.6%), hirsutism (n=2, 1.2%), infertility (n=2, 1.2%), menopause (n=6, 3.5%), cervical dysplasia (n=1, 0.6%), urinary incontinence (n=1, 0.6%), uterine leiomyoma (n=2, 1.2%). However, four (2.4%) patients presented to the Gynecology and Obstetrics outpatient clinics for general follow-up examination.

Fifthy-three (31.2%) of 170 patients had a prior diagnosis of headache including TTH (n=2, 3.8%), migraine (n=35, 66.0%), sinus headache (n=10, 18.9%), vascular type headache (n=1, 1.9%), and other headaches (n=5, 9.4%).

The obstetric and gynecological diagnoses of the patients were categorized into five groups as abnormal uterine bleeding, pregnancy, pelvic pain, vaginitis and others. Meanwhile, analyses of the headache diagnoses were based on three groups as migraine, TTH and others.

A-hundred and seventeen patients were newly diagnosed headaches based on the ICHD-ß3 criteria (8). Among the 170 patients with prior and newly diagnosed headaches, 60.0% had migraine type headaches, 31.2% had TTH and 8.8% had other types of headaches.

When further analyses were made in order to assess the association of headache types with gynecological and/or obstetric diagnosis, there were no statistically significant association between the headache types and gynecological and/or obstetric diseases (p=0.488) (Table 1).

Table 1: Frequency of headache types in patients with gynecological and/or obstetric diseases.

		Neurological Diagnoses		
		migraine (n, %)	tensiontype-headache (n,%)	others (n, %)
Obstetricandgynecologicaldiagnosis	Abnormal uterine bleeding	23 (54,8)	18 (42,9)	1 (2,4)
	pregnancy	26 (63,4)	11 (26,8)	4 (9,8)
	Pelvic pain	24 (60,0)	12 (30,0)	4 (10,0)
	vaginitis	11 (68,8)	4 (25,0)	1 (6,2)
	others	18 (58,1)	8 (25,8)	5 (16,1)
	Total	102 (60,0)	53 (31,2)	15 (8,8)

Among the patients with migraine, pregnancy, pelvic pain, and abnormal uterine bleeding were the most frequent obstetric and gynecological diagnosis, respectively. On the other hand, TTH frequency was found to be higher in the patients with abnormal uterine bleeding, but this increased frequency showed no statistical significance ($p>0.05$). Furthermore, the clinical features of headaches in migraine patients with prior and newly diagnosis (n=102), were summarized in Table 2.

Table 2: Clinical features of headaches in migraine patients with prior and newly diagnosis

Characteristics of migraine patients (n:102)	
Age (years)*	33.76±10.29 (16-65)
Headache onset (years)*	20.78±8.06 (7-49)
Headache duration (hours)#	7 (2-24)
Headache severity (VAS[1])#	8 (7-10)
Family history presence+	57 (%55.9)
Comorbid disease presence+	37 (%36.3)

1: (VAS Vizuel Analog Skala)

Data were presented as *: mean±SD (range); #: median (IQR); +: n (%)

Discussion

Headache is a universal symptom and complaint affecting the health and lifestyle in general population (9). A home-based Turkish study investigating headache among the population of 18 to 65 years old, demonstrated a rate of 57.8 % for the headache sufferers (10). Similar to this study, our study group also consisted of participants between the ages of 15 to 65.

As we know from the literature, the most frequent headache types worldwide are primary headaches (11). In women, lifetime prevalence is 99% for headache of any kind, 25% for migraine, and 88% for tension-type headache (12).

A home-based epidemiological study in Turkey evaluating the frequency of headaches in general population reveals a one-year prevalence rate of 16.4% for migraine (8.5 % in men, 24.6 % in women), and 5.1 % for TTH (5.5 % in men,4.5 % in women). And 1.3% of study population had reported other types of recurrent headaches which were diagnosed as unclassified headaches (10). However, the rates of migraine and TTH frequencies were higher in our study, as 60.0 % and 31.2 %, respectively. These increased rates of primary headaches can be attributed to the design of our study, which was performed in outpatient clinics of gynecology and obstetrics.

Since substantial research has emerged in the recent years highlighting sex differences in the epidemiology and characteristics of various headache disorders, specifically in migraine with female dominancy, we aimed to assess the headache rates and types in women presenting to the outpatient clinics of gynecology and obstetrics. While the sex differences in primary headaches can be attributed to biological and psychosocial factors, sex hormones seem to be the major contributor, already (13, 14). Moreover, migraine prevalence rates vary in women by hormonal status (i.e. across the menstrual cycle, with or without taking hormonal contraceptives, pregnancy), further underscoring a strong role for sex hormones in headache (15).

Suggesting the role of sex hormones in primary headaches particularly in migraine, 60 % of the women were diagnosed as migraine in our study. A previous study analyzing the prognosis of migraine during the pregnancy and/or puerperium revealed that, 20 % of women who were pregnant or in the puerperal period had preexisting migraine, and 15 % of these reported that they did not had any headache attacks during the pregnancy (16). However, it is important to remember that pregnancy can be the first existence of migraine attacks (17).

Finally, when we evaluated the frequency of migraine with gynecological and/or obstetric diagnosis of women, we found an increased frequency of migraine in women with vaginitis and pregnancy. However, there was no statistical significance. This can also be attributed to hormonal changes in pregnancy.

Since the possible limitation of our study is the lack of assessment of migraine and headache characteristics with the gynecological and/or obstetric diagnosis of women who presented to the outpatient clinics, further studies can be designed to investigate the possible associations between the clinical features of headaches and gynecological and/or obstetric diagnosis among women.

In conclusion, the results of our study demonstrated the frequency of headache among women as a common comorbid problem accompanying gynecologic and/or obstetric diseases. Since most of the patients with headache complaint had no diagnosis and treatment, this can be considered as a burden and potential danger for women. Thus, in order to differentiate the possible secondary headaches which can be a potential danger particularly in women with pregnancy or postpartum period, we would like to emphasize the importance of questioning headache in gynecology and obstetrics outpatient clinics.

References

1. Ravishankar K. The art of history-taking in a headachepatient. Ann Indian Acad Neurol 2012; 15 7–14.
2. Baykan B, Ertas M, Karli N, Akat-Aktas S, Uzunkaya O, Zarifoglu M. et al. The burden of headache in neurology out patient clinics in Turkey. Pain Pract. 2007;7:313-23.
3. Linet MS, Stewart WF, Celentano DD, Ziegler D,Sprecher M.An epidemiologic study of headache among adolescents and young adults. JAMA 1989; 261:2211–16.
4. Smitherman TA, Ward TN. Psychosocial factors of relevance to sex and gender studies in headache. Headache. 2011; 51:923-31.
5. Chai NC1, Peterlin BL, Calhoun AH. Migraine and estrogen Curr Opin Neurol 2014; 27: 315-324.
6. Peterlin BL, Gupta S, Ward TN, Mac Gregor A. Sex matters: evaluating sex and gender in migraine and headache research. Headache 2011; 51: 839–42.

7. Greco R, Tassorelli C, Mangione AS, Smeraldi A, Allena M, Sandrini G, et al. Effect of sex and estrogens on neuronal activation in an animal model of migraine. Headache 2013; 53: 288–96.

8. Headache Classification Committee of the International Headache Society (IHS). The International Classification of Headache Disorders, 3rd edition (beta version). Cephalalgia 2013; 33: 629-808.

9. Leonardi M, Steiner TJ, Scher AT, Lipton RB. The global burden of migraine: measuring disability in headache disorders with WHO's Classification of Functioning, Disability and Health (ICF). J Headache Pain 2005; 6: 429-40.

10. Ertas M, Baykan B, Orhan EK, Zarifoğlu M, Karli N, Saip S, et al.One-year prevalence and the impact of migraine and tension-type headache in Turkey: a nationwide home-based study in adults. J Headache Pain 2012; 13:147-57.

11. Stovner LJ, Hagen K, Jensen R, Katsarava Z, Lipton R, Scher A, et al. The global burden of headache: a documentation of headache prevalence and disability worldwide. Cephalalgia 2007; 27:192-210.

12. Saper JR; Silberstein SD; Gordon CD; Hamel RL;Swidan S Handbook of Headache Management 2nd edition. Philadelphia, Pa; USA: Lippincott Williams & Wilkins; 1999.

13. Buse DC, Loder EW, Gorman JA, Stewart WF, Reed ML, Fanning KM, et al. Sex differences in the prevalence, symptoms, and associated features of migraine, probable migraine and other severe headache: results of the American migraine prevalence and prevention (AMPP) study. Headache 2013; 53:1278–99.

14. Chu MK, Kim DW, Kim BK, Kim JM, Jang TW, Park JW, et al. Gender-specific influence of socioeconomic status onthe prevalence of migraine and tension-type headache: the results from the Korean Headache Survey. J Headache Pain 2013; 4: 14: 82.

15. Chaia NC, Peterlina BL, Calhounb AH. Migraine and estrogen. Curr Opin Neurol. 2014; 27:315–24.

16. Kvisvik EV, Stovner LJ, Helde G, Bovim G, Linde M. Headache and migraine during pregnancy and puerperium: the MIGRA-study. J Headache Pain 2011; 12: 443-51.

17. Chancellor AM, Wroe SJ, Cull RE. Migraine occurring for the first time in pregnancy. Headache 1990; 30: 224–27.