

Migraine Prevalence and Treatment in Students of Yogyakarta State University

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Abstract - This research is the preliminary research of the development of a Self-Massage Therapy Model for migraine healing. In Indonesia, research on the migraine prevalence in large populations has not been widely carried out, so that valid data about migraine prevalence have not been widely known. The peak prevalence in both men and women occurs between the ages of 25-55 years. Hormonal factors are thought to be the main cause of more women suffering from migraine than men because of the menstrual cycle, contraception, and post-menopause. Most migraine sufferers have a family history of migraine and experience headaches and muscle tension. The research was conducted in the students of Yogyakarta State University in March 2018. The sample of 50 people was incidentally determined based on their complaint of suffering from migraine. The research used descriptive statistical analysis test. The survey results showed that 86% of students suffered from migraine every week. 50% of them took drugs to eliminate migraines, 30% chose to sleep to eliminate migraine, and 20% chose massage therapy in the clinic or salons. They explained that there were positive changes in migraine by taking drugs, which could reduce and cure migraine, but had side effects, one of which was drowsiness. A small percentage of students who suffered from migraine chose massage therapy at a salon with a minimum duration of 45 minutes and costs around 30-150 thousand Rupiah. From this research, it can be concluded that the most-chosen migraine treatment by migraine sufferers is taking the drug.

Keywords - Migraine, Prevalence, Treatment

I. INTRODUCTION

Migraine is a recurrent headache disorder for 4-72 hours with typical characteristics: located unilaterally, pulsating pain, moderate or high intensity, aggravated by routine physical activities, and associated with nausea and/or photophobia and phonophobia [1]. Migraine is characterized by headache that is generally unilateral with pulsating pain, and the location of pain is generally in the frontotemporal region [2]. Migraine headaches occupy the highest number of the composition of patients who come to see a neurologist. From the observation, 10 major outpatient diseases were found from the incidence of this type of disease from the clinical practice in Medan in 2003, where migraine was ranked first [3]. Migraine is experienced by more than 28 million people worldwide. It is estimated that the worldwide prevalence reaches 10%; more women than men. Some research shows that the lifetime prevalence in women is 25%, whereas in men only 8%[4].

The age of most migraine sufferers is around 22-55 years [5]. Direct and indirect costs are estimated at 5.6 to 17.2 billion US dollars based on loss of work time and productivity due to migraine [6]. Migraine ranks 19th among all causes of disability in the world and ranks 12th among women worldwide [7].

In the UK, migraine affects more than 14% (7.6% of men and 18.3% of women) of the population; more than 6 million people. About 5.7 effective days of work are lost per year for every migraine worker or student worker, and in the working days up to 90,000 people do not go to work or school because of migraine[8]. In the United States, it is estimated that about 18% of women and 6% of men suffer from migraine, the prevalence of which increases sharply [9]. In the United Kingdom and the United States, it is estimated that about two-thirds of migraine sufferers have never consulted to the doctor, were not told the right diagnosis, and were only treated with (or purchased by themselves) over-the-counter drugs [10].

The main mechanisms underlying the occurrence of migraine include biological, psychological, and psychophysiological theories [11]. Biological theories focus on the cerebrovascular mechanism and emphasize the role of biochemical agents (for example, serotonin, histamine, and catecholamines) that play a role in triggering headaches. Psychological theories focus on the relationship of various psychological variables (for example, emotional specificity, psychodynamic factors, personality, stress, psychiatric conditions, and reinforcement) and tendency to migraine. Psychophysiological theory emphasizes potential role of 'stress' and tries to explain the specific mechanisms of stress that trigger headaches. No single theory can explain the occurrence of migraine. The current theory is based on a hyperexcitable "trigeminovascular complex" in the sufferers genetically predisposed to suffer from migraine [12].

The triggers of acute migraine attacks are multifactorial, including hormonal factors (menstruation, ovulation, oral contraception, hormone replacement), diet (alcohol, nitrate-containing meat, monosodium glutamate, aspartame, chocolate, stale cheese, not eating, fasting, drinks containing caffeine), psychology (stress, post-stress conditions/weekends, anxiety, fear, depression), physical environment (blinding light, bright light, visual stimulation, fluorescent light, strong odour, weather changes, noise, height, shampooing) [13]. Factors related to sleep (sleeplessness, oversleeping), factors related to drugs

(atenolol, caffeine, cimetidine, danazol, diclofenac, estrogen, H₂-receptor blockers, histamine, hydralazine, indomethacin, nifedipine, nitrofurantoin, nitroglycerin, ethinyl estradiol, ranitidine, reserpine), and other factors (head trauma, physical exercise, fatigue) [14].

Migraine attacks are often preceded by premonitory symptoms such as hyperosmia, yawning, mood swings, anxiety, food craving, sexual excitement, fatigue and emotional instability that last from a few minutes to days. In addition, migraine attacks are also associated with loss or reduction in appetite, nausea, vomiting, and more severe sensitivity to light and sound, and often involve mood, motor, and sensory disorders [15]. The diagnosis of migraine has five predictors, namely pulsating, in 4–72 hours, unilateral, nausea, and disrupting activity (disabling) [16].

Common indications of migraine prophylaxis include (1) headaches associated with disability occurring three days or more per month, (2) migraine duration of more than 48 hours, (3) ineffective, contraindicated, or overused acute migraine medication, (4) attacks producing severe disability, elongated aura, or manifest migrainous infarction, (5) attacks of more than two to four times per month despite the adequate treatment/care, (6) patient preference for preventive therapy [17].

Natural ingredients for preventing migraine include ginkgolide B, a natural antiplatelet activating factor (PAF), the main extract of herbal ginkgo biloba. PAF is a strong ammonia projection agent and the nociceptive agent released during the inflammatory process. Ginkgolide B modulates the action of glutamic acid (the main excitatory neurotransmitter in the central nervous system). Ginkgolide B is effectively used in cases of migraine with or without aura [18].

This research aimed to determine the migraine prevalence and treatment in the students of Yogyakarta State University.

II. RESEARCH METHOD

A. Type of Research

This research used a descriptive quantitative method which is defined as a form of research based on data from systematic empirical reality that can be measured by questionnaires which are then described in narrative form [19].

This research is descriptive research. Descriptive research is the research that seeks to describe a phenomenon or an event that occurred at the present time [20].

Descriptive research focuses on solving actual problems as they are at the time the research is conducted.

B. Time and Place of Research

The research was conducted on March 15, 2018 at the Yogyakarta State University campus.

C. Research subject

Population is a large number of subjects that have certain characteristics that attract the researcher to study [21]. The population in this research were the students who suffered from migraine. The population used in this research were Yogyakarta State University students who suffered from migraine.

The sample is part of the number and characteristics of the population. If the population is large, and the researcher is not likely to study all them, for example due to limited funds, energy and time, he can use samples taken from that population. The sample size used in this research was 50 students [22].□

D. Research Procedure

This research used a quantitative descriptive design in which the researcher interviewed migraine sufferers in doing ways to cure migraine. Then, each sample of migraine sufferers was obliged to write the usual treatment to cure migraine.

E. Data Collection Techniques

The data collection technique used in this research was a questionnaire to obtain objective data on the usual treatment for migraine healing.

After collecting data on migraine prevalence and treatment, the results of the questionnaire were evaluated.

F. Measuring Instrument

A research instrument is a tool used to measure natural and social phenomena observed. Instruments are tools for measuring, observing or documenting data [23]. The instrument used in this research was a questionnaire.

The data collection technique used a questionnaire. The questionnaire was used to dig data from the respondents or students who are currently and have experienced migraine. This research was measured based on the questionnaire to find out the usual treatment to cure migraine.

The data processing was carried out to compare the results of treatments mostly used and more effective in migraine healing. The data were analysed, and the results were discussed.

III. RESULTS AND DISCUSSION

After knowing how to treat the common migraine healing, we found various results and discussions of theories related to migraine treatment applied to the subject. The results and discussion in this research are presented as follows.

A. Result

The data were obtained using questions in the questionnaire. The researcher found the data in the form of common treatments used to cure migraine, which is presented in the table below.

TABLE I. DATA ON MIGRAINE PREVALENCE AND TREATMENT

Total Sample	Taking Drug	Sleep	Massage
50	50%	30%	20%

B. Discussion

The observation results showed that there were 86% of students suffering from migraine every week. The survey results showed that 50% of students took drugs to eliminate migraine, 30% of students chose to sleep to eliminate migraine, and 20% of others chose to take massage therapy in a clinic or on a salon. Taking drugs to eliminate migraines is the most chosen method by the students to eliminate

migraine because the results are relatively fast and it is easier to find the drug. However by taking drugs, there are side effects that can interfere with the activities of the body such as drowsiness, weakness, nausea, pain, etc. The second way that people choose to get rid of dizziness is sleeping. It is one effective way to get rid of dizziness. Nevertheless, it takes a relatively long time of approximately 1-3 hours.

IV. CONCLUSION

Based on the results of the research and data analysis carried out, it can be concluded that the most chosen migraine prevalence and treatment by the students as migraine sufferers are taking drugs. This can be seen from the scale of steps taken to cure migraine.

Taking drugs can cure migraine in a shorter period of time than sleeping or doing massage therapy in a salon. The disadvantages of taking drugs have to spend money to buy, the side effects that can inhibit activities, and less safety for long-term consumption. In an effort to cure migraine, the treatment taken must be effective, safe and inexpensive. Migraine is caused by a sensation of movement or a sense of movement from the body or the surrounding environment with other symptoms that arise, especially from autonomic tissue caused by a disruption of the body's balance by various conditions or diseases. This situation will affect migraine healing.

With the results of this research, it is hoped that it can be used to develop one of the most effective, inexpensive and minimal side effects of migraine treatment in the future.

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