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CAUSES OF MIGRAINE IN KARACHIITES AND ITS TREATMENT FROM MUSHROOMS

Fakhsheena Anjum*, Nighat Razvi[1], Hina Yasin, Arije Ahmad, Marvi Khan Sherwani, Nimra Rahim Khan and Sidra Arshad

Dow College of Pharmacy, Dow University of Health Sciences, Karachi, Pakistan
[1]Department of Pharmaceutics, Faculty of Pharmacy, University of Karachi, Pakistan

***Corresponding author e-mail:** fakhsheena_a@yahoo.com

ABSTRACT

This study was conducted to find the causes of migraine in Karachi, Pakistan and also to assess the efficacy of mushrooms (*GANODERMA LUCIDUM* therapy) in treatment of migraine. Migraine is an episodic headache that affects the general population. There are lots of factors that cause migraine and may include stress, exposure to light and sounds, anxiety, caffeine reduction etc. Many medicines are used for treating migraine and *Ganoderma lucidum,* a medicinal fungus belonging to the Polyporaceae family, (known in Japan as REISHI), is now being used in Pakistan for this purpose. It has proved to completely eradicate migraine without side effects. The study was conducted by researchers using a specially designed questionnaire developed from different sources to find the major factors contributing to the occurrence of migraine. About 220 questionnaires were filled by the subjects from March to May 2012. Regarding the treatment using mushrooms (ganotherapy), about 66 cases of migrainuers were studied by the researchers who were treated at DXN International Clinic, Karachi, Pakistan. Results recorded were calculated statistically. People having migraine may experience different types of symptoms and they may belong to different age groups. The most frequent aggravating factors reported by migrainuers were stress 50.90% (n=112), sunlight 48.18% (n=106) and loud noise 45.5% (n=100). The relieving factors for migraine reported by most of the migrainuers were rest/sleep 61.8% (n=136), dark/quiet environment 39.54% (n=87) and various medications used 24.09% (n=53). Ganotherapy (treatment with *Ganoderma lucidum)* can prove to be very helpful in treating migraines with almost no side effects. According to the cases studied after ganotherapy, 93.99 % persons (n=62) had relief after taking the product among which 83.18% (n=54) of the people experienced no side effects and 25.8% persons (n=17) used G. lucidum powder for the treatment of conditions other than migraine as well. Migraine is a common cause of severe, recurring headache; however, it can be effectively treated and sometimes even prevented. A good trigger-management strategy can be a very powerful tool to help manage migraine better. After the survey, it was found that the most common causes of migraine in Karachi were stress, exposure to light, sound, and empty stomach. It was also found that the treatment for migraine through Ganoderma lucidum is very effective and may completely eradicate this condition with almost no side effects in majority of patients who used it.

Keywords: Migraine, Triggers, *Ganoderma lucidum,* Reishi, Ling Zhi, Mushrooms.

INTRODUCTION

A migraine headache is usually an intense, throbbing pain on one, or sometimes, both sides of the head. Migraines are debilitating and affect the sufferer's quality of life.**[1]** Migraine headaches are common in children and occur with increasing frequency through adolescence.[2,3] Migraine is a very severe form of headache characterized by additional symptoms.[4,5] There are two different types of migraines: migraines without aura and migraines with aura. Migraine without aura is characterized by a sudden onset with moderate to severe throbbing and unilateral pain which is worsened by movement.**[6]** On an average,

untreated episodes last from 4 to 72 hours and have major impact on the sufferer's daily life.[7,8] Migraines with aura involve visual disturbances to physical sensations. The symptoms occur in alternating body sites during different attacks and can last between 5 and 60 minutes**.**[6]

The recognition of migraine has been enhanced by the introduction of diagnostic criteria for both migraine with and without aura by the International Headache Society**.**[9] In a follow-up to the 1999 *American Migraine Study*, 39.9% of patients meeting IHS criteria for migraine had been previously diagnosed with sinus headache, with or without other headache types by a physician and by extrapolation, over 11 million Americans diagnosed with sinus headache actually have migraines**.**[10]

Fundamental goals of long-term migraine treatment have been established that include (1) reduction of headache frequency, severity, duration, and disability; (2) reduction of reliance on poorly tolerated, ineffective, or unwanted acute pharmacotherapies; (3) improvement in quality of life; (4) avoidance of acute headache medication escalation; (5) education and enablement of patients to manage their disease to enhance personal control of their migraine; and (6) reduction of headache-related distress and psychological symptoms**.** [11]

Individuals may experience more than one variety of migraine, or even different headache disorders (typically migraine and tension); many patients with a history of motion sickness (especially carsickness during childhood) are migraineurs**;**[12,13] headaches associated with nausea +/- vomiting after minor head trauma are probably migrainous[14,15] and migraine frequently manifests initially in childhood with cyclic vomiting and abdominal pain, car-sickness or combinations thereof**.**[13,16,17]

A number of potential migraine triggers have been identified**.**[18,19] It was found that 50% of patients with intractable migraine could reduce the frequency of their attacks to half by eliminating various triggers**.**[20] Medical treatment of migraine consists of two approaches which are not mutually exclusive: acute (also known as symptomatic or abortive treatment) and prophylactic therapy. A "Step-Care" treatment approach is prudent**.**[21] Virtually any immediate-relief medication may induce analgesic-rebound headache in migrainuers; even the combination drugs containing caffeine, ergots, barbiturates or narcotics**.**[22] If these medications are used more than three times per week, then the risk of this rebound increases significantly**.**[21]

Ganoderma lucidum (reishi mushroom, Ling Zhi) has been an economically important species, particularly in the Far East countries (China, Japan, Korea, etc.), for over thousands of years. It is widely grown on a commercial scale and is commonly purchased for its medicinal and spiritual properties.

The Chinese and Koreans know it as Ling Zhi (mushroom of herb and immortality), whereas the Japanese call this mushroom reishi or mannentake (10,000 year mushroom)**.**[23] A detailed description of the reishi mushroom and its taxonomy can be found in References**.** [24,25]Worldwide, more than 250 Ganoderma species have been described. [24,26] However, in therapeutic practices and literature citations, Ganoderma usually refers to the species of G. lucidum. At least 140 different triterpenes have been identified in G. lucidum**.**[24,25,27,28,29,30] A report regarding effective dosages of G. lucidum used in the treatment of various ailments was also summarized by Chang.[31]

METHODOLOGY

The research on migraine was conducted: (a) To find major factors causing migraine among Karachiites and (b) Treatment of subjects having migraine using the mushroom *Ganoderma lucidum* (ganotherapy).The questionnaire to find the causes of migraine was developed from different sources by the researchers comprising of subjects' demographic data and information regarding migraine. The researchers were present at the time of filling the questionnaire by 220 subjects after taking their consent. Regarding the treatment using mushrooms (ganotherapy), the researchers recorded about 66 cases from DXN International Clinic, Karachi, Pakistan after taking permission from the facility.

RESULTS AND DISCUSSION

Migraine is a common neurological disorder that affects 18% of women and 6% of men in the US**.**[32] Out of 220 subjects in the study, there were 20% (n=45) males and 79.5% (n=175) females in which 33.2% (n=73) were married and 66.8% (n=147) were unmarried. Information regarding the age of enrolled subjects is shown in **Table 1** according to which majority of the persons i.e. 43.6% (n=96) having migraine belonged to the age group of 21-30 years and 29.5% (n=65) persons were in the age group of 10-20 years. 37.11% (n=108) persons in the study reported that they did not have any family history of migraine, whereas 33.33% (n=97) replied positively in which patients with maternal family history were 20.96% (n=61) and with paternal family history were

8.59% (n=25). 31.8% (n=70) persons reported that migraine awakened them occasionally at night, 22.7% (n=50) awakened very often whereas 45.5% (n=100) replied in negative. Out of 220 subjects, 55.04% (n=131) reported that they had no health disorders whereas 21.42% (n=51) reported that they were suffering from different kinds of allergies and only 8.6% (n=19) persons having migraine had a history of head or neck injury.

Routine activities of 96.36% (n= 212) persons were affected by migraine and it was found from the survey that 48.7 % persons (n= 60) consulted a doctor for migraine, 25.2% (n=31) persons went to see hakims and 22.7% (n=28) persons consulted homeopathic doctor. 11 point pain scale (0 = no pain, 10 = pain as bad as it could be) was used to assess the severity of migraine in the subjects**.**

The 11-point pain scale was 55% more sensitive than the four-point pain scale in detecting clinically important differences.[33] Among the migrainuers enrolled in the study, 12.3% (n= 27) had mild pain whereas 53.2% (n=117) had moderate and 34.5% (n=76) persons suffered from severe pain. Previous studies suggest that pain scores are limited in demonstrating the effects of treatment and the burden of migraine from the patient's perspective**.** [34]

It is obvious from **Table 2** that migraine exists in the age group of 10-30 years more i.e. in 71.8% (n=158) persons than in the late ages and it does happen to many people on monthly basis lasting from about 2 to several hours.

Migraines can be effectively controlled but it is reported that migraine sufferers lose on average 6.5 days of work per year and will record 44 days of working with a migraine headache**.**[35,36] It was found after studying the cases that majority of the subjects suffering from migraine experienced nausea, vomiting and difficulty in concentrating while some had blurred vision, dizziness, diarrhea and numbness **(Fig. 1).** The main triggers of migraine are shown in **Fig.2** in which major one was found to be stress (73.18%) after the survey. **Kelman** writing in ***Cephalalgia*** listed stress at a frequency of 79 % and food at 26.9 %.[37] The most reported relieving factor **(Fig. 3)** was rest/sleep by 85.14% subjects. The most frequent aggravating factors reported by patients were stress (21.96%), sunlight (20.78%) and loud noise (19.6%) **(Fig. 4)**.

After ganotherapy: Herbal cures have existed throughout history in almost all lands of the world. The usual dosage of Ganoderma lucidum (Reishi) given is generally based on personal experience with patients suffering from different illnesses. [38]

It was recorded from the cases of treated persons that 13.6% (n=9) persons took reishi powder for a month, 28.8% (n=19) persons used it for more than 2 months, 15.2% (n=10) persons for 6 months, 6.1% (n=4) persons for a year and 36.4% (n=24) persons used it for more than 1 year. 93.99 % persons (n=62) had relief after taking the product, whereas only 6.03 % persons (n=4) replied negatively. According to the cases studied, 81.5% (n=54) of the people experienced no side effects whereas 1.51% (n=1) reported nausea, 1.51% (n=1) vomiting, 12.12% (n=8) diarrhea and 6.06% (n=4) had stress like symptoms.

CONCLUSION

Migraine in Karachiites is due to stress mainly and affects the daily life activities of people. It can be concluded that treatment for migraine through Ganoderma lucidum is very effective and may completely eradicate this condition with almost no side effects in majority of patients who used it.

Table 1: Frequency of migraine in different age groups

Age groups of enrolled subjects (years)	Frequency	Percentage
10-20	65	29.5
21-30	96	43.6
31-40	27	12.3
41-50	20	9.1
51-65	12	5.45
Total	220	

Table 2: Migraine History

Age of Onset of migraine (years)	**Frequency of migraine**	**Percentage of migrainuers**
10-20	158	71.8
21-30	46	20.9
31-49	16	7.3
41-50	0	0
51-65	0	0
Total	220	
Migraine experience		
Daily	34	15.5
Once	64	29.1
Weekly	49	22.3
Monthly	61	27.7
Several times	6	2.7
Less frequently	6	2.7
Total	220	
Migraine duration		
Not more than 2 hours	56	25.5
5-12 hours	75	34.1
12-24 hours	55	25
1 week or longer	23	10.5
30 minutes	5	2.3
Up to 1 hr	6	2.7
Total	220	

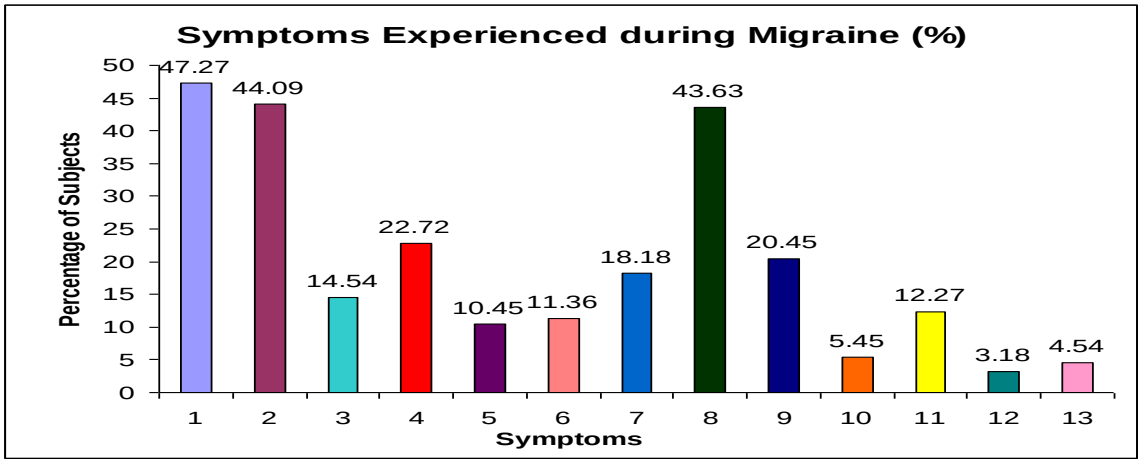

Fig 1: Various symptoms experienced by migrainuers
(where, on X-axis: 1= Nausea, 2= Vomiting, 3= Diarrhea, 4= Blurred/double vision, 5= Drooping eyelids, 6= Puffy eyelids, 7= Numbness/tingling, 8= Difficulty concentrating, 9= Dizziness, 10= Runny nose, 11= Anxiety, 12= Speech difficulty and 13= Loss of consciousness)

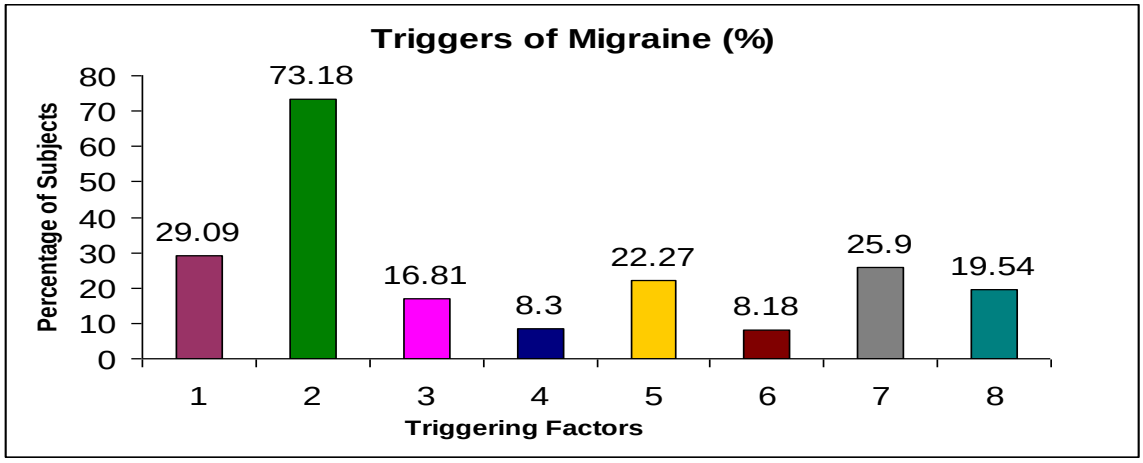

Fig 2: Triggering factors reported by migrainuers
(where on X-axis: 1=Anxiety, 2= Stress, 3= Dehydration, 4= Exposure to light, 5= Exposure to sound, 6= Physical exertion, 7= Empty stomach, 8= Menstruation)

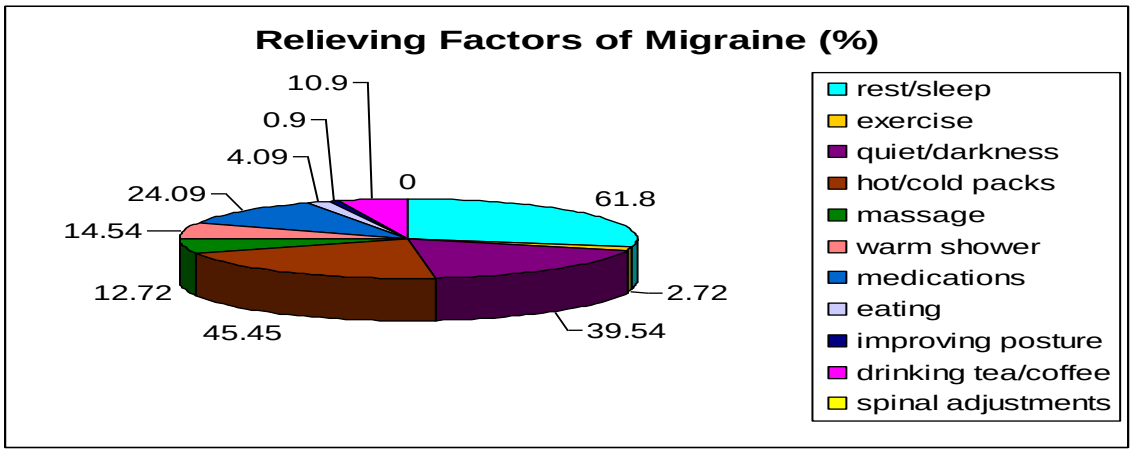

Fig 3: Relieving factors reported by migrainuers

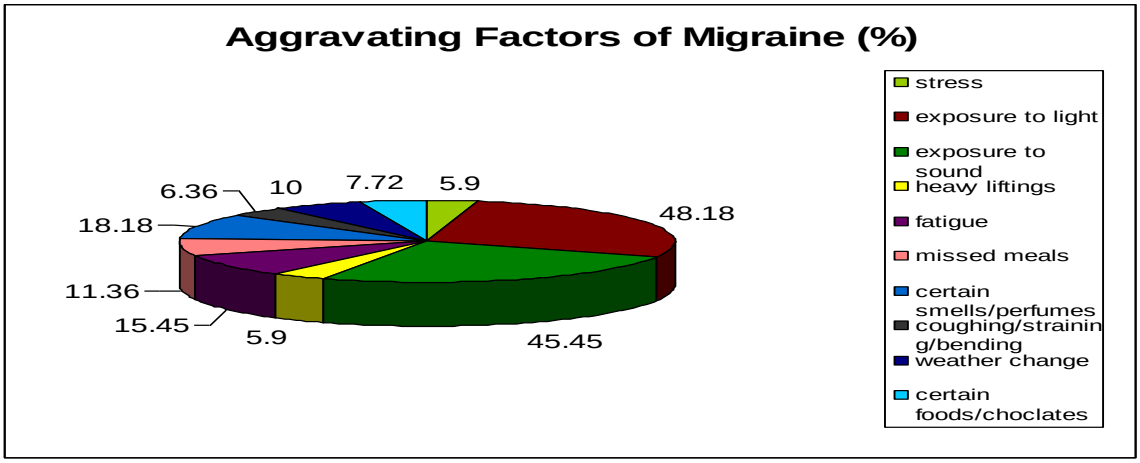

Fig 4: Aggravating factors reported by migrainuers

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