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Migraine headache in Shirqat city and The Role of Some Prophylactic Drugs

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ABSTRACT

Background: Headache disorders: are classified as primary and secondary, migraine is one of the most common primary headache. It affects 6% of American men & 18% of women.

The aim of this study is to determine the effects of some prophylactic drugs on migraine headache during and after treatment and distribution of the disease according to age and gender in Shirqat city.

Materials &Methods: a prospective study was performed in Shirqat general hospital - outpatient clinic in Shirqat city from September 2016-September 2019. The age of patients were ranging between (15-60 years) with mean age of patients was (31, 9) and there are 103 male and 224 female .Inclusion criteria in general included patients who had frequent or long lasting migraine headaches.

Results: In this study most patients were women, female-male ratio about 2,2:1, mean age 31.9. in our study used six prophylactic drugs and patients divided to groups, each group used one prophylactic drug. All prophylactic drugs show good effect on migraine headache during and even after treatment.

Conclusions:

Migraine headache one of the most common primary headache in Shirqat city, more in female and in young and middle ages.

And All prophylactic drugs showed good obvious effects and the best one was propranolol.

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Introduction

Headache disorders: are classified as primary and secondary, migraine is one of the most common primary headache. It affects 6% of American men & 18% of women. [1]

Migraine is also divided into:

1. Migraine with aura.
2. Migraine without aura.

Other types of migraine headache include:

Hemiplegic migraine, complicated migraine and chronic migraine menstrual related headache (MRM)

The diagnosis is usually clinically and depending on a patient's history. [4]

A headache severity, frequency, trigger factors, associated symptoms, and drugs are very important in diagnosing headache disorder and evaluating the treatment efficacy . [5]

In addition, a detailed history is so important to differentiate between migraine and (tension and cluster headaches) for which they frequently confused.

Tension headache is bilateral has a pressing-character and not aggravated by ordinary activities. However; a single patient may have both headaches. [2,3]

Cluster headache: commonly unilateral surrounding an eye and associated with nasal congestion or eye redness. [5]

The main goals of preventive drugs in migraine treatment are to improve the quality of life and reduction the frequency and severity of the disease.

It is generally accepted that a good response to prophylactic drugs is at least a 50% reduction in the frequency or severity of migraine attacks.

The prophylactic agents for migraine headache should undergo a careful evaluation of their benefit /risk ratio.[6]

The most common trigger factors for migraine include: Diet (chocolate, cheeses, alcohol, nitrites, monosodium glutamate, aspartame, fasting).

Drugs (hydralazine, ranitidine, nitroglycerine, histamine, reserpine, oestrogens, cocaine, , marijuana)

Hormonal (Menstruation, ovulation, oral contraceptives)

Psychological (stress, post-stress (weekends and holidays) , depression, anxiety, fear)

Sleep (Lack of or excessive sleep)

Environmental (Flashing, blinding and fluorescent lights; weather changes, perfumes, altitude).

Others (Head injuries, physical exercise) [7,8]

Some prophylactic established drugs in migraine headache

1. **Propranolol** is the drug of first choice unless there is asthma; some patients cannot tolerate B-blockers and others fail to respond.
2. **Topiramate**: with the current pharmaceutical benefits scheme restrictions on topiramate, it is vital to document the basis for considering prescribed for patients in whom propranolol and pizotifen had failed, especially if the failure was due to side effect
3. **Pizotifen** other choice: It is widely used so general practitioners are familiar with it. Drowsiness and weight gain makes it an unattractive option for many patients, migraine with prominent vestibular features may respond especially well to pizotifen.
4. **Amitriptyline** commonly used as a modifier of chronic pain, and has particular attraction where migraine is associated with other painful conditions (for example, associated with other painful conditions (for example, exacerbation of migraine after whiplash injury). The side effects of tricyclic antidepressants are well known, but doses used for migraine are relatively low ,most patients tolerate them.
5. **Sodium valproate** relatively small doses used for migraine, and the most common side effect is weight gain.
6. **Verapamil** for migraine with aura symptoms . [9]

Aim of Study

The goal of our study is to determine the effects of some important prophylactic drugs during and after treatment of patients with migraine headache and distribution of the disease in Shirqat city according to age and gender.

Methods

At beginning of this study numbers of patients were 453 patients, but just 327 patients continue to the end of the study and 125 lost to follow-up and 327 enrolled in this prospective study which was performed in (Shirqat General Hospital- Outpatient clinic of medicine) in Shirqat city from September 2016 to September 2019.

The ages of patients were ranging between (15-60) years with mean age of patients was 31,9 .

There are 103 male and 224 female patients.

- Inclusion criteria in general included patients who have frequent or long lasting migraine headaches.

<u>Indication for prophylaxis therapy</u>

- ≥ 4 headache per month or ≥ 8 headache days/month.

- Debilitating attacks despite used acute therapy.
- Contraindication to acute medication or difficulty tolerating.
- Overused of acute medication.
- Patients preference to fewer attacks.
- Migraine subtypes.

Presence of comorbid disease like obesity, asthma, hypertension, congestive heart failure and others played a significant role in choosing which type of prophylactic drug suitable for each patient. [10-14]

Results

A 327 migraine headache patients were recruited to this study 103 males and 224 females (Figure 1); (mean age (31.9), range (15-60) years (table 3)

Patients subdivided to groups and each group used one prophylactic drug according to careful evaluation of their benefit / risk ratio and any comorbid conditions considered in the choice preventive drugs for migraine. Most of patients used propranolol 25,68% and less one verapamil 8.86 % (Table 4).

The respond to the each prophylactic drug in migraine headache monitored during and after treatment including (decrease frequency, duration, severity and no headache). The results showed the best prophylactic drug was propranolol during and after treatment for 2 years' duration (Table 5).

which type of prophylactic drug suitable for each patient. [10-14[

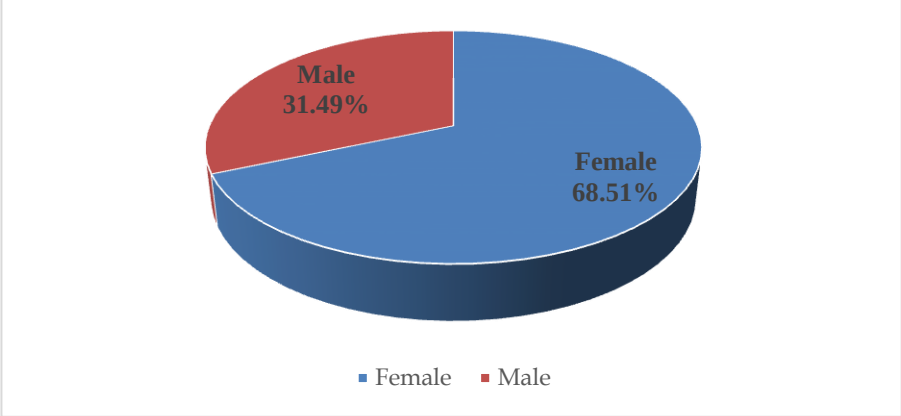

Figure 1: Distribution of migraine patients according to the gender in Shirqat City.

Table 3 : Distribution of migraine patients according to age.

Age / year	No	%
15-19	8	2.44%
20-24	32	9.78 %
25- 29	114	34.86 %
30- 34	89	27.21 %
35-39	39	11.92 %
40-44	19	5.81 %
45-49	21	6.42 %
50- 54	2	0.61 %
55-60	3	0.91%
Total	**327**	**100 %**

Table 4 : Dose and percent of each prophylactic drug in our study and some comments for each drug

Drugs	Dose	No. of patients	Percent	Comments
1. Propranolol	40 mg	84	25.68%	Severity - Contraindication (C/I)in asthmatic patients and relative C/I in permanent aura, preferable in HT
Pizotifen	0.5 mg	79	24.15%	Moderately C/I in overweight
Topiramate:	250- 100 mg	53	16.2 %	Moderately C/I in overweight, but moderate favour in permanent aura
Amitriptyline	25-100 mg	49	14.98%	Strongly favour in overweight
5.Sodium Valproate	10- 25 mg	33	10.09%	Relatively C/I in overweight and moderately, favour in chronic non-headache pain
6.Verapamil	30- 160 mg	29	8.86 %	Moderately favour in permanent aura and hypertension

Table 5 : Response to Prophylactic drugs in migraine headache during and after treatment and that is include (decrease frequency,duration, severity and no headache)

Drugs	Response / during treatment		Response / afterTreatment	
	1-3 mon.	4- 6 mon.	6- 12 mon	1-2 yr.
1. Propranolol	50. 57%	75.86 %	70.1 %	64.37 %
2. Pizotifen	49. 40 %	72.15 %	64.56 %	60.76 %
3. Sodium Valproate	45.28 %	56. 60 %	54.71 %	35.85 %
4. Topiramate:	48.98 %	59. 18 %	53.06 %	36.73 %
5. Amitriptyline	54. 55 %	60 . 61 %	57.58 %	51.52 %
6. Verapamil	98.28 %	55. 17 %	51.72 %	37.93 %

Discussion:

Migraine headache is a complex and recurrent headache disorder that is one of the most common complaints of medicine .

In the united states, more than 30 million people have to one or more migraine headache per year. This correspond to approximately 18% of females and 6% of males. [15[

Before puberty, the prevalence and incidence of migraine are higher in boys than girls. After age 12 years, the prevalence increases in males and females, reaching a peak at age 30-40 years. The female-to-male ratio increase from 2:5:1 at puberty to 3:5:1 at age 40 years, except for women in perimenopause. A study by Hsu et al suggests that women aged 40-50 years are also more susceptible to migraineous vertigo. [16] Onset of migraine after age 50 years is rare

In our study male-female ratio 1:2:2 for this sample of migraine patients. (Figure 1) A 62% of patients in this study aged between (25-34 years) and less than 2% between (50-60) years (Table 3).

About 50% of patients with migraine headache used either propranolol and pizotifen tablets as prophylactic drugs and relatively propranolol was small doses and used of other prophylactic drugs were in different percent and according to criteria related to drug itself (adverse effects, interaction, and contraindication) and may related to patients (obesity, HT, congestive heart failure, Asthma and other comorbidities, less drug used in this study was verapamil 8.86 % (Table 4.(

As you know- the aim of preventive therapy is to reduce frequency ,severity and duration of headache attacks.

Propranolol: since 2000, clinical studies had provided consistent evidence for propranolol efficacy as a preventive therapy (17,18).

Pizotifen: despite not related in 2012 U.S guideline, it was showed probable efficacy, grade B or C monotherapy in French guidelines. (19, 20)

Amitriptyline: consistent evidence supports using of amitriptyline as a preventive agent and dose ranges from 10-100 mg./day (20)

Sodium valproate: At least 6 clinical studies, provided consistent evidence for the efficacy of valproate in reducing attacks of migraine headache. (19)

Topiramate : is supported by 11 clinical trials has similar efficacy to that of (propranolol and valproate.

Verapamil: is an old preventive drug for migraine, it has been downgraded in the latest US guideline. (19- 21)

Our study showed preventive agents were more effective and obvious than previous studies during and even after stopped the agents, specially propranolol that lead to decrease frequency, severity and duration of headache and was the best preventive agent and that not showed in any previous studies. (Table 5)

Conclusion

Migraine headache is one of the most common primary headaches in Shirqat city, more in young and middle age patients and more than 2/3 of patients were female**.**

All prophylactic drugs play a role in reducing frequency, severity of migraine headache and may reach to (No headache) during or even after stopped treatment **.**

Prophylactic drugs had good obvious effects on migraine headache, but in different percentages and the most effective one in our study was propranolol**.**

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