

Original article:

Prevalence of migraine with common comorbid conditions

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Abstract:

Introduction: Migraine is one of the most common neurological disorders and can be severely disabling during attacks (Andlin-Sobocki et al., 2005) (1). The highest prevalence occurs between the ages of 25 and 55 years Wang et al., 2000) (2). The term comorbidity is used when two illnesses occur at a greater than coincidental rate than what is seen in the general population.

Methodology: The present cross sectional study was carried out in Department of neurology at Chengalpattu medical college hospital.

Results: 114 patients were found to have comorbid illness . which means 38% of migraine patients had comorbid illnesses. In that 49 patients are males , 65 patients are females. The image of female predominance may be due to the reason migraine is more common in females. Among 114 patients the prevalence of various comorbid illnesses are given below .

Conclusion: To conclude migraine patients should be routinely screened for comorbid illnesses. Most of the times comorbid illnesses are under diagnosed.

Introduction:

Migraine is one of the most common neurological disorders and can be severely disabling during attacks (Andlin-Sobocki et al., 2005) (1). The highest prevalence occurs between the ages of 25 and 55 years Wang et al., 2000) (2). The term comorbidity is used when two illnesses occur at a greater than coincidental rate than what is seen in the general population. This suggests that at some level, the two illnesses are interrelated.(3) (4) Once a person has been diagnosed with migraine, it is important to consider that other medical conditions may also be present. This is why a complete medical history and examination and investigations are needed in all patients who is receiving a work-up for migraine. When a comorbid condition is identified along with migraine, treatment now becomes more complex because there are two separate conditions to manage and both conditions may be interrelated.(5) For example, if someone is struggling with a bout of difficult depression, they may find their migraine attacks become worse. If depression improves, they may find that their migraine also improves. For this reason, migraine and potential comorbid conditions need to be accurately diagnosed and treated .(6) Understanding the association of migraine with other health conditions is an important part in providing optimal care.

Objectives:

To find out the prevalence of common migraine comorbidities.

Methodology:

Study centre: Chengalpattu medical college hospital.

Type of study: Cross sectional study

Study population: Migraine patients attending to the neurology op of Chengalpattu medical college hospital.

Sample size: 300 patients

Period of study: April 2018 to September 2018

Selection criteria:

Inclusion criteria
<ol style="list-style-type: none">1. Patients diagnosed with migraine .2. Age: >18 yrs.3. Both male and female.4. Patients willing to give informed consent
Exclusion criteria
<ol style="list-style-type: none">1. <18yrs2. Patients not willing to give informed consent3. Patients with mental retardation4. Alcohol abuse

Procedure:

Study was done after getting approval from Institutional Ethics Committee .In this study, 300 patients diagnosed with migraine in the neurology OP were selected. Selected patients were asked for complete history, clinical examination was done and details of the investigation done were noted in case record form. Irritable bowel syndrome was diagnosed with ROME III criteria . Assessment of depression was done by Hamilton depression rating scale and anxiety by Hamilton anxiety rating scale. . Patient with past history of comorbid illness ,or the patients are not yet diagnosed and having symptoms suggestive of other comorbid illness sent for appropriate investigations to confirm the diagnosis and it was noted . Any need to make modifications to the treatment or dosing plan was addressed to the treating physician .

Analysis plan:

The data collected from the study was analysed statistically by SPSS software .

Results:

In this study 300 patients of all types of migraine screened for comorbid illness.

Among the patients screened 179 are females 121 are males.

114 patients were found to have comorbid illness . which means 38% of migraine patients had comorbid illnesses. In that 49 patients are males , 65 patients are females. The image of female predominance may be due to the reason migraine in more common in females. Among 114 patients the prevalence of various comorbid illnesses are given below

Table 1: Overall prevalence of comorbid illness in migraine

Co morbid illness	No of patients			percentage
	Male	Female	Total	
IBS	26	31	57	19%
Anxiety	11	19	30	10%
Depression	8	10	18	6%
Epilepsy	4	5	9	3%
Total	49	65	114	38%

Since some of the patients have overlapping comorbid illnesses .

Migraine patients with one type of comorbid illness and overlapping comorbid diseases are split up and given below

Table 2 : Distribution of overlapping comorbid illness in migraine patients .

Co morbid illness	No of patients
IBS	38
IBS & Anxiety	15
IBS & Depression	2
IBS & Epilepsy	2
Anxiety	13
Anxiety & Epilepsy	2
Depression	13
Depression & Epilepsy	3
Epilepsy	3

Irritable bowel syndrome

IBS is the most common comorbid among the four illness.

FIG 2 : Distribution of IBS among 57 patients

IBS – D type is seen in 50 of the total 57 patients. Rest of the 7 patients have IBS –C and mixed types.

IBS is more commonly seen in less than 35 years of age group.

Anxiety

2nd most common comorbid illness is anxiety. 30 out of the 300 patients is suffering from anxiety. All of them are diagnosed to have general anxiety disorder. Like IBS, Anxiety is also common among less than 35 years of age group. 15 out of 30 patients with anxiety have IBS. Two of the anxiety patients have epilepsy.

Depression

18 out of the 300 patients have been suffering from depression – Major depressive disorder . Depression is common among more than 35 years unlike IBS & anxiety which is common in less than 35 years of age.

Epilepsy

9 of the patients have epilepsy. Complex partial seizure is seen in 6 of the 9 patients.

Discussion:

Since many illnesses are reported to be comorbid with migraine , which stresses the clinical complexity of this headache disorder.

Comorbidity in migraine is important from several perspectives:

- co-occurrence of diseases can complicate the diagnosis, e.g., focal sign of migraine and stroke;
- one disease can remind the clinicians of the other diseases, e.g., migraine and restless legs syndrome (RLS);
- one treatment for two diseases, e.g., tricyclic antidepressants for migraine patients with depressive disorders;
- comorbidity of illnesses can provide clues to the pathophysiology of migraine

The exact pathophysiology of IBS is not understood yet. IBS and migraine are both 2–3 times more prevalent in women than in men (7-9). IBS has been shown to be a disorder with an increased intestinal permeability and this permeability increases with more severe IBS symptoms (10).

Clinicians may fail to inquire about or may minimize depressive symptoms because they may consider them to be normal adaptations to the pain associated with migraine headaches.

Failure to recognize comorbid depression can result in suicide. It has been shown that the rates of suicidal ideation and attempts were significantly higher in patients with comorbid depression and migraine with aura than in persons with either disorder alone (11).

A 2017 Canadian population health survey published in the journal *Headache* showed that 6 percent of individuals with migraines had experienced generalized anxiety disorder (GAD) in the past 12 months, compared with only 2.1 percent of those without migraines(12)

Epilepsy and headache are the two most common neurologic disorders affecting individuals of all ages worldwide. They constitute an important health and socioeconomic problem

A review of andermann and andermann of 13 studies reported that prevalence of epilepsy in patients with migraine ranges from 1% to 17% with a median of 5.9%(13)

In this study 300 patients of all types of migraine screened for comorbid illness. Our study focussed on irritable bowel syndrome(IBS), anxiety, depression and epilepsy because they are the common comorbid illnesses in migraine patients . We found out that IBS is the most common comorbid among the four illness(50%) 2nd most common comorbid illness is anxiety(26%)

For the patients with comorbid illness following treatment plans were suggested Migraine &

Epilepsy – Valproate

Migraine & IBS – Amitriptyline Migraine &

Constipation – Escitalopram Migraine &

Depression – Amitriptyline

Migraine & Anxiety – Escitalopram or Amitriptyline

Limitations of the study are duration of the study is short and the sample size is small . If we include more number of patients ,there is a chance to detect the comorbid illness with low prevalence also.

Conclusion:

To conclude migraine patients should be routinely screened for comorbid illnesses . Most of the times comorbid illnesses are underdiagnosed .This leads to suffering of patients with the comorbid illness and reduces their productivity .Some of the patients are receiving separate pill for each type of illness . If the comorbid illnesses are anticipated and diagnosed properly we can reduce the pill load and poly therapy induced side effects & drug – drug interactions . Hence we can improve the patient's over all well being and productivity.

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