



CODEN [USA]: IAJPB

ISSN: 2349-7750

**INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES**<http://doi.org/10.5281/zenodo.2532409>Available online at: <http://www.iajps.com>

Research Article

**PREVALENCE OF NON-FOCAL DEFICIT HEADACHE IN A
STUDY DONE IN A TERTIARY CARE HOSPITAL**Dr. Ali Mehdi¹, Dr. Arsalan Ali², Dr. Muhammad Javed³¹ Ex-House Officer Nishter Hospital, Multan² Ex-House Officer Sheikh Zayed Hospital, Rahim Yar Khan³ Ex-House Officer Nishter Hospital, Multan.**Abstract;**

Headaches are one of the most common clinical presentations. On one hand, they are non-specific while on the other hand they can predict severe underlying causes. The patients with persistent headache with no focal deficit need to be investigated thoroughly. . Objective; To assess the frequency of structural lesion of brain in patients who present with no focal deficit headache on CT scan brain. Methods; It is a cross sectional study, conducted at Department of Medicine, Nishter Hospital, Multan from January 2017 to December 2018 in which 172 cases enrolled via non probability sampling, who presented without any focal deficit headache as per operational definition were enrolled. Their demographic data with details and other history of focal lesions was obtained and recorded. All the patients underwent CT brain plain at the department of Radiology nishter hospital, Multan. The lesions detected on Ct-scan were noted. Results; In our study, a total 172 cases presented with the history of headache and of these 103 (60%) were females and 69 (40%) were males. The mean age recorded of the patients enrolled at presentation was 28.32±5.15 years. In 116 (67.44%) patients, the CT was reported to be absolutely normal. Regarding other lesions detected, in 42 (24.41%) cases sinusitis was seen, CSOM was seen in 8 (4.65%), SOL in 4 (2.32%) and brain abscess in only 6 (3.48%) cases. Regarding the lesions and the gender stratification 71 (69.09%) females had no findings related to headache on CT as compared to 21 (30.91%) males while sinusitis was seen in 18 (63.16%) male cases as compared to 38 (36.84%) females with a near significance of 0.07. Conclusion; Headache is one of the common presenting complaint at hospitals and in more than 65% of cases the CT brain findings are normal.

Corresponding author:**Dr. Ali Mehdi,**

Ex-House Officer Nishter Hospital, Multan

QR code



Please cite this article in press Ali Mehdi et al., *Prevalence Of Non-Focal Deficit Headache In A Study Done In A Tertiary Care Hospital*, Indo Am. J. P. Sci, 2018; 05(12).

INTRODUCTION:

Headache is one of the most reported neurological symptom in outpatient emergency departments [1]. It has two types 1. Primary headache, 2. secondary headache and the latter is characterized as the headache that secondary to underlying cause. Secondary headache can further be sub-classified to sinusitis, referred pain, otitis media and most importantly structural brain lesion (infarct, bleed, malignancies, abscesses, hydrocephalus, and aneurysm) [2].

There is a general fear among some a lot of patients that they suffering from a very severe disease and therefore further diagnostic investigations are needed. The clinical presentation of patients vary as the causes of the headaches vary, Patients who have structural brain lesions or referred pain present to hospitals with hemiplegia, monoplegia, cranial nerve abnormalities or other focal deficits or associated symptoms of ear discharge or pain respectively. But such cases as well report headache even without focal deficit and are then diagnosed with the help of neuroimaging and interventions have avoided serious CNS damage [3,4].

For the diagnosis of the lesos of structural damage to brain, CT scan and MRI are being used and good results have been shown. But the issue is the headache with out focal deficit, that on one hand pose difficulty in diagnosis while on the other hand causes financial burden on the patient due to undue investigations. [5-7].

A large review has been done, of 3026 scans of patients with the headache assessed by CT brain and it has been recorded that only a small fraction of the patients suffered from a very serious disease approximating only 2.8% in the terms of brain tumors, hydrocephalus, arteriovenous malformations, aneurysm, strokes, subdural hematoma and malignancies [8].

OBJECTIVE; To assess the percentage of structural brain damage in patients who present with non-focal deficit headache on CT scan brain.

MATERIALS AND METHODS:

It is a cross sectional study done at the Department of Medicine, Sheikh Zayed Hospital (SZH), Rahim Yar

Khan (RYK) from July 2017 to June 2018, in our study, 80 patients were enrolled via random consecutive sampling, who presented with the headache with no focal deficit. Their history, detailed demographic data and basic investigations were done and recorded. They then underwent CT scan brain plain at the department of Radiology of the same hospital. The findings were detected and noted.

SAMPLE SELECTION:

The following criteria were observed to select the sample population:

Criteria for inclusion:

1. Patients age 21-65
2. Noth the genders
3. patients having headache for more than 1 month wiyh no focal deficit.

criteria for exclusion:

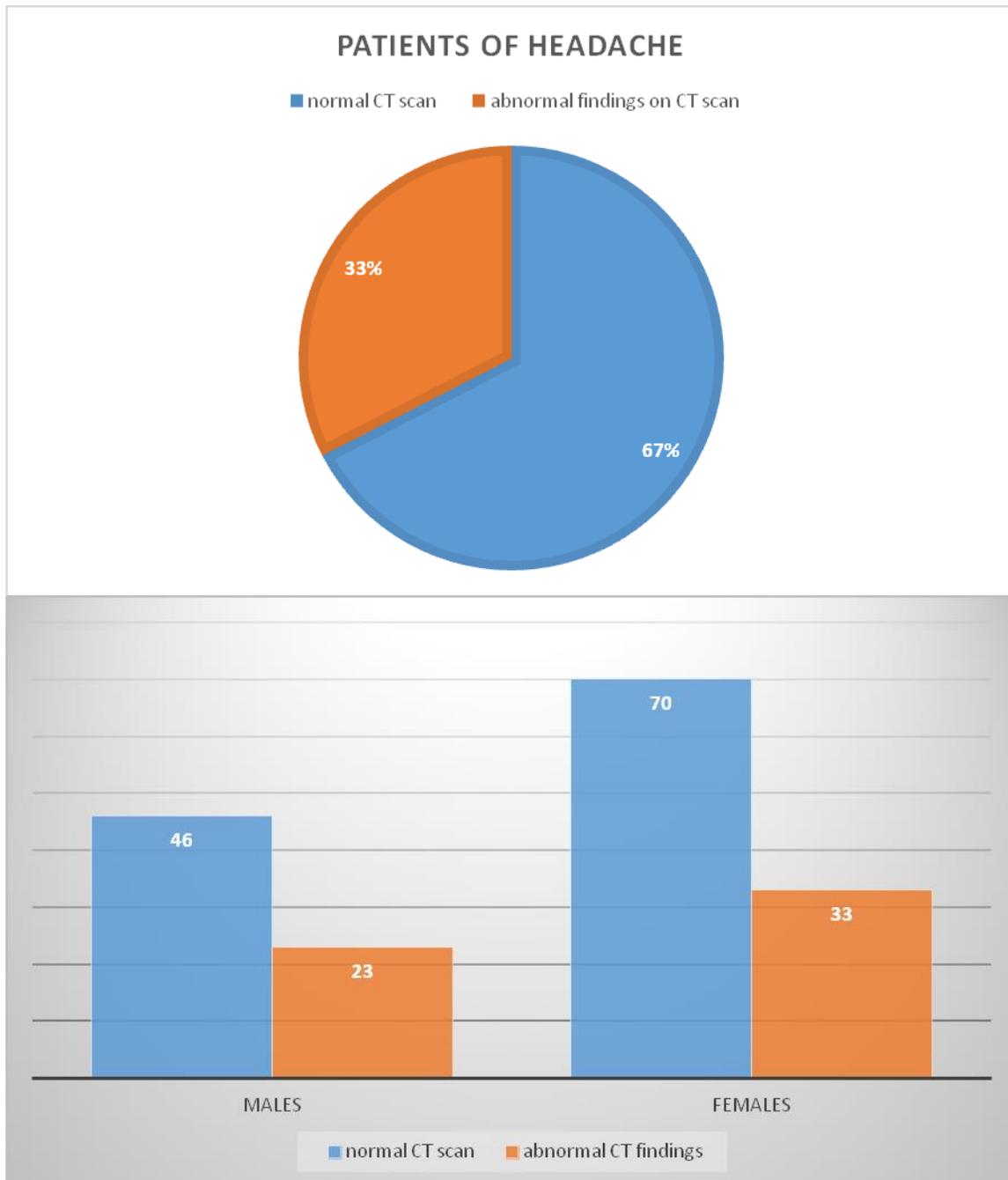
1. Already known case of structural brain disease, infection or hydrocephalus.
2. Head trauma in last 2 months.
3. Patients having focal deficit, hemiparesis, paralysis of any part of the body.

Statistical analysis. The data was collected and recorded then spss version 21.0 was applied for analysis. Stratification of effect modifiers and chi square was applied with p value less than 0.05.

RESULTS: In our study, a total of 172 cases presented with headache were enrolled, and of these 103 (60%) were females and 69 (40%) were males. The recorded mean age at the presentation was 28.32 ± 5.15 years. In 116 (67.44%) of cases, the CT scan showed no abnormal findings.

Regarding other lesions detected, in 41 (23.75%) cases sinusitis was seen, CSOM was seen in 6 (3.75%), SOL in 4 (2.32%) and brain abscess in only 6 (3.48%) cases.

Regarding gender stratification and other lesions 67 (69.09%) females had normal CT as compared to 23 (30.91%) males while in males the frequency of sinusitis was more (63.16%) as compared to (36.84%) in females.



DISCUSSION:

Headache is the one of the most frequently presented and well-reported entity in the emergency settings and hence add to the high burden on the patient regarding investigations and treatment. Headache, as a presentation, is a subjective feeling even in the context of extensive investigation, but, as well, can predict the mild to severe underlying condition.

In our study, 116 (67.44%) of cases, did not have any abnormality.

The result of our study are comparable to other studies done, showing the yield of underlying cause of headache on ct scan brain is quite low, like observed by Fazel R et al it be only 10% [9].

While another study done, used clinical warning criteria (CWC) for assessment of headache, and then

underwent investigation i.e CT scan brain and recorded to be 64.3% with absolutely normal CT scan brain and 35.7% had abnormal findings. A similar study was conducted in Nepal ,in which 73% had no abnormal findings on CT scan brain. [11].

Regarding other lesions detected, in 42 (24.41%) cases sinusitis was seen , CSOM was seen in 8 (4.65%), SOL in 4 (2.32%) and brain abscess in only 6 (3.48%) cases.

The results are similar to study conducted by Rai GS et al who enrolled 500 cases with headache and out of them,374 had normal CT scan, while of them, sinusitis was the most common finding affecting 58 cases and 13 with CSOM abscess were seen in 10 and SOL in 5 cases [12] .

In our study,it was found and recorded that females suffered from headaches more as compared to males, and percentage of no abnormal findings on CT scan brain is higher in females as compared to males. A number of studies have been done on this topic worldwide,and the results are comparable, like a study was done by Lipton et al found that females suffer from headaches more than males with the ratio of 2:1 to 3:1.[13]

The headcahes with normal CT was more observed in females justies they ae more susceptible to migraine and tension headaches. On the other hand, a good percentage of males even present with headache with nirmal Ct scan brain, the reason may be the cluster headavhe which also shows no abnormal findings on CT scan brain [14].

CONCLUSION:

Headache is a common presentation at in emergency departments as well as out patient departments of hospitals and in almost 65% of cases the CT brain done reveals no pathology.

REFERENCES:

1. Kernick DP, Ahmed F, Bahra A, Dowson A, Elrington G, Fontebasso M, et al. Imaging patients with suspected brain tumour: guidance for primary care. *Brit J Gen Pract.* 2008;58(557):880-85.

2. Headaches. Different types of headaches [internet]. 2016 [cited on 15-06-2016]. Available at www.webmd.com/migrainesheadaches/guide/migraines-headaches-basics.
3. KS. Secondary headache and head pain emergencies. *Primary Care.* 2004;31(2):381-93.
4. Nepal P, Shrestha A, Ghimire N. Evaluation of CT scan findings in patients presenting with headache. *J Chitwan Med Coll.* 2014;3(4):9-12.
5. Sun Z, Ng KH, Vijayanathan A. Is utilization of computed tomography justified in clinical practice? : application in the emergency department. *Singapore Med J.* 2010;51(3):20006.
6. Diener HC, Katsarava Z, Weimar C. Headache associated with ischemic cerebrovascular disease. *Rev Neurol.* 2008;164:819–24.
7. Evans RW. Diagnostic testing for the evaluation of headaches. *Neurol Clin.* 1996;14(1):1-26.
8. Aygun D, Bildik F. Clinical warning criteria in evaluation by computed tomography the secondary neurological headaches in adults. *European Journal of Neurology.* 2003;10(4):437-42.
9. Fazel R, Krumholz HM, Wang Y, Ross JS, Chen J, Ting HH, et al. Exposure to low-dose ionizing radiation from medical imaging procedures. *N Engl J Med* 2009 Aug;361(9):849-857.
10. Alders EE, Hentzen A, Tan CT. A communitybased prevalence: study on headache in Malaysia. *Headache: The Journal of Head and Face Pain.* 1996;36(6):379-84.
11. Nepal P, Shrestha A, Ghimire N. Evaluation of CT Scan Findings in Patients Presenting with Headache. *Journal of Chitwan Medical College.* 2014;3(4): 9-12.
12. Rai GS, Rai T, Jain L, Vyas MM, Roshan R. Evaluation of CT and MRI findings among patients presented with chief complaint of headache in central India. *J Clin Diag Res.* 2016;10(2):21-25.
13. Lipton RB, Stewart WF, Diamond S, Diamond ML, Reed M. Prevalence and burden of migraine in the United States: data from the American Migraine Study II. *Headache: The Journal of Head and Face Pain.* 2001;41(7):646-57.