

## The Association Between Headache and Hypertension In Baquba Teaching Hospital-Iraq.

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### *Abstract*

*Introduction: Tension-type of headache is the commonest form of headache. According to the current International Classification of Disorder of Headache. Hypertension is diagnosed when blood pressure is elevated more than 140 mmHg (systolic) over 90 mmHg (diastolic). Headache in general is considered a symptom of hypertension although there is no association of tension headache and mildly elevated blood pressure.*

*Patients and Methods: This study is conducted in the out-patient clinic of otolaryngology – Head and Neck Surgery and Neuro- medicine department in Baqubah Teaching Hospital in Diyala over a period from July 2018 to November 2019. 116 patients of different age groups were studied randomly.*

*Results: The results showed that of the total number of 116 cases , 96 patients (82.7%) was normal ,20 patients (17.3%) was hypertensive and complaining of tension headache.*

*Conclusion: Based on the results in this study, we found that there is no relationship between the complaint of tension headache and hypertension based on moderate to severe phases in patients attending otolaryngology and neuro-medicine consulting clinics in Baquba Teaching Hospital for patients with tension headache.*

### **Introduction**

Tension-type of headache is the commonest form of headache. According to the current International Classification of Disorder of Headache. It can be classified into 3 sub-types, Firstly, infrequent episodic headache which means that more than 12 headache days per year). Secondly frequent episodic tension headache (12-180 days per year), and finely chronic tension headache more than 180 days per year [1]. The intensity of headache can be divided into mild to moderate and frequently described as tightening or pressing type that is not provoked by normal daily activity, for instance, climbing stairs or walking [2]. The pain in tension headache usually continues for several hours many days and is mostly sensed bilaterally [3]. Statistical studies reported that 50% of people have attacks of headaches at any specified year, as well as about 90% of the selected people, have a prolonged history of tension headaches [3]. The diagnosis of tension headache is based on the dull sensation of headache and normal neurological assessment. Throughout the clinical examination,

the most common outcome findings are abnormal pericranial muscles pain and tenderness[4].

Hypertension is diagnosed when blood pressure is elevated more than 140 mmHg (systolic) over 90 mmHg (diastolic). Headache in general is considered a symptom of hypertension although there is no association of tension headache and mildly elevated blood pressure[5]. On the other hand, a piece of controversial evidence reported that moderate high blood pressure may predispose to headaches [5]. Many studies investigated the association between tension headache and high blood pressure [5, 6,7]. It has been observed that about 31% of high, untreated hypertensive patients suffered from a headache. On the other hand, only 15% of well-controlled and treated hypertensive patients complain of tension-type of headache[8]. A further study was done on 104 patients, with uncontrolled hypertension, the study found that just 16% of patients suffered from headaches [9]. Though Stewart in his literature established that once patients become recognized for their high arterial blood pressure, the intensity and sensation of headache highly increases[10]. Hansson et al in his study, established that antihypertensive medications may minimize the prevalence of tension headache by using clinical data from many trials via many randomized double-blinded, controlled studies[11].

### Patients and Methods

This study is conducted in the out-patient clinic of otolaryngology – Head and Neck Surgery and Neuro- medicine department in Baqubah Teaching Hospital in Diyala over a period from July 2018 to November 2019. 116 patients of different age groups were studied randomly. A full history was taken, their name, age, sex, type of tension headache, the duration of related features, medication, smoking habit, the number of cigarettes, as well as alcohol drinking. Physical examination was performed including the body height & weight by using a special scale. The blood pressure is assessed by indirect auscultation, by using a mercury sphygmomanometer. A full ENT (Ear, Nose, and Throat) examination has been done to exclude other possible etiology of headache. Data were collected and analyzed by using the chi-square test.

### Results

The results showed that of the total number of 116 cases , 96 patients (82.7%) was normal ,20 patients (17.3%) was hypertensive and complaining of tension headache (Table 1).

patients	number	%
normal	96	82.7
HT	20	17.3
<b>Total</b>	<b>116</b>	<b>100%</b>

**Table (1):**Represents the percentage of normal and hypertensive patients with tension headaches .

Moreover, the results in this study also revealed that the percentage of hypertensive males were 4 patients (16%), compared with hypertensive females which were 16 patients (17.3%)

BP gender	Normal		Hypertensive	
	number	%	number	%
male	20	83.3	4	16.6
female	76	82.6	16	17.3
Total	96	82.7	20	17.2

Table (2): Shows the percentage of normal and hypertensive patients with tension headache according to gender.

Moreover, we found in this study that all hypertensive persons was above age of 35 years (table 3).

BP age	Normal		Hypertensive	
	number	%	Number	%
>35	60	51.7	20	17.2
<35	36	31	Non	Non
Total	96	82.7	20	17.2

Table(3)Shows the percentage of hypertension according to the age.

Other findings in our study were that the percentage of hypertension in non-smokers was 17.2% (20 patients). Furthermore, no one of the selected patients who are

BP Smoking state	Normal		Hypertension	
	number	%	Number	%
smoker	20	20.8	Non	Non
Non smoker	76	79.1	20	17.2
Total	96	82.7	20	17.2

smokers has hypertension as shown in (table 4).

Table (4), represents the association between smoking and hypertension.

## Discussion

This study revealed a relatively low incidence of hypertension in a patient with tension headache in Diyala governorate. Our data shows that there are 20 patients (17.2%) with hypertension compared to 96 patients (82.7%) who were normal. We demonstrated, in a large sample of patients with tension headache attending a consulting clinic, that there is no association between the diagnosis of hypertension and tension headache. These findings are in agreement with the results of recent epidemiological and clinical studies which have not shown any consistent association between blood pressure and the diagnosis of hypertension with headache [8,9,10,12]. Our findings also revealed that hypertension more in females was (17.3%) compare to the male which was (16%). These findings suggest that high blood pressure in female patients with headaches may be secondary to reverse causality. The association of headache with age would be a likely confounder, but it may be measured in the multivariate investigation. The role of chance cannot be exempted. (in our study all hypertensive persons were above the age of 35). Smoking is a confounder in our study because no one that he/she smoker have hypertension. Regardless of being frequently accepted as a possible cause of tension headache, the relationship between uncontrolled hypertension and headache was principally described in former researches, not regulatory for confounding and for the responsiveness of severe hypertension. It has been suggested that the alertness of the diagnosis of high blood pressure may be a cause for the advanced incidence of tension headache among patients complaining of hypertension [8]. Since almost all members of our study knew that they had high blood pressure, this potential bias on the correlation between the diagnosis of hypertension and the complaint of tension headache was controlled. The virtual homogeneous presentation of the lack of any reliable link between uncontrolled blood pressure, hypertension, and tension headache required to be merged into the clinical program. Both patients and clinicians still have confidence in such correlation, in spite of the explanation that most of the patients may not recognize if their blood pressure was controlled (high or low) based on the presence of headache [12,13].

## Conclusion

Based on the results in this study, we found that there is no relationship between the complaint of tension headache and hypertension based on moderate to severe phases in patients attending otolaryngology and neuro-medicine consulting clinics in Baquba Teaching Hospital for patients with tension headache.

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