



Assessment of Blood Pressure in patients with headache – preliminary data from a Brazilian cohort

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Introduction

There is controversy in the literature regarding the relationship between headaches and blood pressure (BP) levels. Studies indicate that patients with headaches have higher, lower or similar BP than those without headaches. Furthermore, headache is widely considered a symptom of elevated BP among patients and physicians.

Objective

To evaluate the blood pressure parameters of patients with headaches in a Brazilian cohort. The secondary objectives are to verify whether there is a correlation between headache intensity and mean BP and whether there are differences in these measurements between those with episodic and chronic headaches.

Methods

This is an analytical and descriptive study from a cohort of live births from June 1, 1978, to May 31, 1979 (n=6748) in Ribeirão Preto/SP. This collection was carried out between 2016 and 2017 using a semi-structured questionnaire. The averages of 3 measurements taken according to the Brazilian Arterial Hypertension Guidelines were considered for the BP variables.

Results

1775 individuals attended the fourth interview, with an average age of 38.13 ± 0.579 , of which 929 (52.3%) were female and an average BMI of 28.75 ± 5.72 . Sixty-three percent (n=1113) reported having had a headache in the last three months, with 16.3% (n=181) reporting having chronic headaches (15 or more days of pain per month). Regarding mean systolic blood pressure (SBP), there were no differences between those with headache (122.19 ± 15.24) and those without headache (124.23 ± 14.18), $p=0.15$. Regarding mean diastolic blood pressure (DBP), no differences were observed between the groups (with headache 78.09 ± 11.43 , without headache 78.39 ± 10.22 , $p=0.59$). A negative but negligible correlation existed between mean SBP ($r=-0.093$, $p=0.002$) and pain intensity. There was no correlation between mean DBP ($r=-0.036$, $p=0.229$) and pain intensity. We compared those with chronic headache (n=181) with those with episodic headache (n=927), there were no differences in mean SBP (121.62 ± 15.72 versus 122.23 ± 15.04 , $p=0.61$) and DBP (78.98 ± 12.37 versus 77.87 ± 11.19 , $p=0.293$).

Conclusion

There were no differences in the mean BP of patients with headaches compared to those without. There were no differences in mean SBP and DBP between individuals with episodic and chronic headaches. Moreover, there was no correlation between SBP or DBP averages and pain intensity.