



## Clinical characteristics of children and adolescents with primary and secondary headaches attended at the tertiary service in Brazil

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### Introduction

Childhood headache is one of the most common neurological symptoms that affects about 60% of children (CR) and adolescents (AD) and its prevalence increases with age. Primary and secondary childhood headache have different characteristics and prevalence, but also have similarities, such as the diagnostic and treatment method. However, the data available in the literature do not take into account the level of complexity at healthy service where these children and adolescents are treated.

### Objectives

To analyze the clinical characteristics of children (CH) and adolescents (AD) with primary and secondary headaches of tertiary-level headache outpatient clinic.

### Methods

Retrospective study, based on review of medical records of CH and AD with primary or secondary headaches between the years 2016 and 2021. Sociodemographic data, medical history, clinical history, and daily routine of the child were obtained. The proportion of primary and secondary headaches in the CH and AD groups was also calculated. For continuous variables and categorical data, the chi-square test was used, considering  $p < 0.05$ .

### Results

A total of 386 medical records were included, of which 206 were CH ( $n=112$ ; 54.8% girls) and 178 AD ( $n=118$ ; 66.8% girls). Headaches were episodic in CH (57.3%) and chronic in AD (49.7%), [ $X^2(2)=10.001$ ;  $p=0.007$ ], of mild intensity in CH (64.1%), strong in AD (48.5%), [ $X^2(3)=25.802$ ;  $p=0.000$ ]. In CH, the most prevalent type of headache was in pressure (64.3%) and pulsatile in AD (52.8%), [ $X^2(5)=14.595$ ;  $p=0.012$ ]. The chi-square test of independence showed that there is a significant association between CH and the presence of migraine [ $X^2(5)=12,746$ ;  $p=0.026$ ], type of cesarean delivery [ $X^2(2)=7.299$ ;  $p=0.026$ ], the use of common analgesics [ $X^2(6)=36.690$ ;  $p=0.000$ ], discharge from the clinic after migraine treatment [ $X^2(5)=22.225$ ;  $p=0.000$ ] and between AD and worsening of pain during physical activity [ $X^2(3)=10.671$ ;  $p=0.014$ ], or pulsatile [ $X^2(5)=14.595$ ;  $p=0.012$ ], and worsens during menstruation period [ $X^2(6)=21.108$ ;  $p=0.002$ ].

### Conclusion

In both groups, migraine was more prevalent and females were the most affected. By associating the CH and AD groups, these clinical patterns are significantly different in several aspects.

**Keywords:** Headache, Childhood, Electronic medical records, Adolescent.

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