



## NSAIDs versus Acetaminophen efficacy in the treatment of Tension Headache: A Systematic Review

Pedro Vitor Ferreira Rodrigues, Cássia Caroline Aguiar da Ponte, Amanda Pereira Sindeaux Pinheiro, Leonardo José Rodrigues de Araújo Melo, Emanuel de Assis Bertulino Martins Gomes, Leslie Mateus de Sousa Nunes, Lucas Frigo, Lucas Soares Radtke, Pedro Lucas Grangeiro de Sá Barreto Lima, Rodrigo Mariano Ribeiro, Sophia Costa Vasconcelos, Lucas Arêa Leão Barreto

Universidade Federal do Ceará, Fortaleza - CE - Brasil;

### Introdução

Tension Headache (TH) is a common cause of daily pain, which is normally treated with the use of Nonsteroidal Anti-Inflammatory Drugs (NSAIDs) and Acetaminophen (Paracetamol). However, there is no definitive evidence about which of the medicines has better efficacy in the remission of the headache, leaving the patients to their own devices to find the best treatment.

### Objectives

Show and compare the effectiveness between NSAIDs and Acetaminophen in the daily use for TH treatment.

### Methods

Randomized Controlled Trials (RCT) were selected to compare the use of NSAIDs and Acetaminophen in patients that suffered from TH. PubMed and Embase medical data bases were used for searching pertinent articles, totalizing in 838 relevant papers. For the screening, the following inclusion criteria were used: 1) Patients that have Tension Headache; 2) Only Randomized Controlled Trials selection; 3) The article needed to be in English; 4) The trial must have data comparing the use of acetaminophen and NSAIDs; 5) It must have the 2 hours after medication pain-free and/or pain reduction in the Visual Analog Scale (VAS) and/or pain relief by hour data of each drug. Only 19 passed the first screening and the second screening selected 7 for the use in this systematic review. Results: A total of 1771 patients (835 NSAIDs and 936 Acetaminophen) were analyzed. The articles showed a mean pain-free after 2 hours of 26,1% (375 patients) in the use of nonsteroidal anti-inflammatory drugs and 18,9% (406 patients) in the paracetamol use for tension headache. The NSAIDs group presented a mean pain relief by 2 hours of 58% (496 patients), versus 44% (510 patients) in the other group. However, the studies proved no remarkable difference ( $P > 0.05$ ) between the medications in a follow-up greater than 3 hours.

### Discussion

The data show a slightly better efficacy for the NSAIDs group, showing an overall superior pain-free percentage at 2 hours and pain relief in the VAS at that same time. Nonetheless, the paracetamol presented also with reliable results in the treatment of tension headache. However there still some questions about the reality of this results since the analysis of time windows longer than 3 hours shows no significant changes in the data. Other factors that compromise the quality of the analyses are the small number of studies that fitted in the inclusion criteria, the subjectivity inherent to pain quantification and the variety of drugs that compound the NSAIDs class.

**Palavras-chave:** Tension Headache; NSAIDs; Acetaminophen; Paracetamol.