



Effect of Amoxicillin/Clavulanic acid Combination on Postoperative Endodontic pain in Patients with Symptomatic Apical Periodontitis: A Randomized Controlled Trial

Ahmed Gomaa Abdel Hamid¹, Khaled Ezzat², Suzan Abdul Wanees Amin³

¹Department of Endodontics, Faculty of Dentistry, Cairo University, Egypt

²Department of Endodontics, Faculty of Dentistry, Cairo University, Egypt

³Department of Endodontics, Faculty of Dentistry, Cairo University, Egypt

Abstract:

Background: Post-operative pain is a real challenge for the endodontist as it can have a detrimental effect on the individual's quality of life so many patients are concerned about feeling pain after endodontic treatment (1). Symptomatic apical periodontitis is one of common causes of dental pain and can arise from inflamed or necrotic dental pulp or infection of the pulp less root canal system. It can be caused by primary infection as a result of pulp necrosis. Alternatively, it can develop because of an exacerbation of a secondary root canal infection in cases of failed endodontic treatment. This may or may not be accompanied by radiographic changes (2). The main treatment strategy for SAP is elimination of the intraradicular infection during a root canal treatment procedure. In more severe cases, surgical treatment could be indicated (3). There is evidence that dentists frequently prescribe antibiotics after endodontic treatment in clinical situations for which they are typically not indicated (4).

Aim: The aim of this prospective, randomized, placebo controlled clinical trial was to evaluate the effect of amoxicillin/clavulanic acid combination on postoperative pain in adult patient with symptomatic apical periodontitis.

Methods: Seventy-eight, endodontic-emergency patients with symptomatic apical periodontitis (SAP) in posterior teeth, randomly received either 10 tablets of Amoxicillin/Clavulanic acid combination (Group A, n=39) or 10 placebo tablets (Group B, n=39) after single-visit endodontic therapy to be taken every 12 h for 5 days. Postoperative pain was assessed 6, 12, 24, 48, 72 and 7 days postoperatively using the numerical rating scale (NRS). Data were statistically analyzed and the significance level (α) was set at 0.05.

Results: There was no significant difference between the two groups regarding the main baseline characteristics including: age, gender, pre-operative pain and canal-number distribution ($p > 0.05$). Results showed no significant



difference between both groups regarding postoperative pain intensity or incidence 6, 12, 24, 48, 72h and 7 days postoperatively ($p > 0.05$).

Conclusion: Postoperative administration of Amoxicillin/Clavulanic acid combination does not seem to affect the postoperative pain within the first 72 hours after a single-visit root canal treatment.

Biography:

Ahmed Gomaa Abdel Hamid is an assistant lecturer of Endodontics. He earned his bachelor's degree in dentistry from Cairo University, Egypt in 2010 then earned his master's degree from Cairo University in Endodontics in 2018. Ahmed has 7 years of experience as general practice of Dentistry and 2 years of private practice as an Endodontist.

Publication of speakers:

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