

Metronidazole for the prevention of dry socket after removal of impacted mandibular third molar in Nepalese patients

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Abstract

Aim: The main purpose of the study was to see whether Metronidazole plays a role in reducing the incidence of dry socket after extraction of mandibular third molars.

Method: A total of 119 patients were evaluated out of which 59 patients were given a single dose of 1200 mg Metronidazole 45 minutes prior to the surgical extraction of third molar. The other 60 patients were not given any prophylactic dose of Metronidazole.

Result: Out of the fifty nine patients who were given Metronidazole prior to the surgical procedure, 16.95% of the patients developed dry socket and among the other 60 patients who were not given Metronidazole, 21.67% developed dry socket.

Conclusion: Metronidazole used as a prophylactic antibiotic for prevention of dry socket after extraction of mandibular third molars has little or no role in preventing dry socket.

Key words: Third molar Surgery, Prevention Antibiotic prophylaxis

Introduction

Dry socket which is also known as Alveolitis Sicca Dolorosa, ASD or Alveolar Osteitis is a common complication after removal of teeth, particularly after surgical extraction of mandibular third molars. The incidence varies from a few percent to 68% depending on the location of the removed tooth/teeth¹. It is a painful condition that usually occurs after few days following the removal of mandibular third molars and can be treated using antibiotics. Dry socket occurs when the blood clot at the site of extractions is dislodged, exposing the underlying bone and nerve endings causing significant pain. Patient presenting with dry socket can manifest any of the features like fever, severe jaw pain, facial swellings, and lymphadenopathy.

Even though the precise cause of dry socket remains the subject of study, researchers suspects several factors may be at play, including bacterial contamination of socket, difficult or traumatic tooth extraction, remaining roots or tooth/root fragments in the socket, type of impacted teeth, presence of pericoronitis etc. Other factors such as age, gender, use oral contraceptives,

menstrual cycle, smoking habits and prolonged use of antimicrobial drugs and mouth rinses can also have a role in the development of dry socket²⁻⁷.

Aim and Objective

The aim of this study was to see whether 1200 mg Metronidazole given as a single dose before extraction of impacted mandibular third molars reduced the incidence of dry socket. The 1200mg was chosen as the appropriate dose to ensure a high serum concentration of Metronidazole for a couple of hours after the surgical procedure.

Method

A total of 119 patients between 17- 30 years of age participated in the study. The patients were healthy and were not taking any other medications. All the 119 patients were treated within a period of 6 months. The patients were referred for removal of either unilateral and/or bilateral mandibular third molars and were treated at the Department of Oral and Maxillofacial Surgery, Kantipur Dental College, Basundhara, Kathmandu, Nepal.

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