

**Effect of Prednisolone Premedication on Postoperative
Pain after Single Visit Endodontic Therapy:
A Randomized Controlled Trial (Part X)**

تأثير البريدنيزولون على ازالة الالم المصاحب لما بعد علاج الجذور فى
زيارة واحدة: تجربة اكلينيكية بالانتقاء العشوائى.

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

«قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ
الْحَكِيمُ»

صدق الله العظيم

آية ٣٢ من سورة البقرة

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

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List of Abbreviations:

VRS: Verbal categorical rating scale.

NRS: Numeric rating scale.

VAS: Visual analogue scale.

GR: glucocorticoid receptors.

DNA: Deoxyribonucleic acid.

COX-2: cyclooxygenase enzymes 2.

Vit D3: vitamin D3.

NSAIDs: Non-steroidal anti-inflammatory drugs.

CONSORT: Consolidated Standard of Reporting Trials.

RCTs: randomized controlled trials.

PEP: Post-endodontic pain.

SPSS: Statistical Package for Social Science.

DB: Double Blind.

There are many reasons patients attend dental practices. These include regular checkups, scheduled visits for planned treatment, for advice about a problem, or because the patient is experiencing pain or other symptoms that concern them. The presence of pain is perhaps the most common reason for an unscheduled visit to the dentist and most general dentists would probably see at least one or two patients with pain almost every working day.

Treatment of endodontic pain can be one of the most rewarding aspects of a dental practice. The main objective of endodontic therapy is to relieve and prevent patient's pain and suffering by a variety of anesthetic, analgesic and sedation techniques. This can be largely controlled during treatment; in contrast, post treatment endodontic pain remains a significant problem.

Treatment of post endodontic pain has many different philosophies. It combines both pharmacological as giving patient a premedication and non-pharmacological treatment. Corticosteroids are group of drugs that can be used for managing inflammation and pain, Prednisolone is one of glucocorticoids that is used to treat a wide variety of acute and chronic disorders as well as malignant diseases and many inflammatory states.

Valid and reliable assessment of pain is essential for both clinical trials and effective pain management. The nature of pain makes objective measurement impossible. Pain can be assessed either by one dimensional tools or multidimensional tools. In dental field, the most common methods used for pain assessment are Verbal categorical rating scale (VRS), Numeric rating scale (NRS) and Visual analogue scale (VAS). They are considered as one dimensional tool. In this study, the intensity

of pain was evaluated by VAS method and the patients were instructed to complete the pain diary after 6, 12 and 24 hours of accomplished root canal treatment.

Pain is a physiologic response to tissue damage. It is a very subjective experience personally influenced by many factors, including, but not limited to, behavioral and cultural learning and expectations, attention response from surrounding people, physical (genetic) factors, and psychological factors. Quantifying and standardizing pain objectively across a group of individuals can be challenging in dentistry, because fear of pain is one of the major reasons for dental apprehension. Postoperative pain is one of the problems in endodontic treatment.

The incidence of endodontic post-treatment pain is of concern to both the patient and the dentist. It is generally attributed to the inflammation of the apical periodontal ligament secondary to one or more of the following factors: instrumentation, hemorrhage, forcing of medications and/or debris apically, and occlusal trauma. Pain resulting from endodontic procedures may last from several hours to several days depending on the damage sustained by the periapical tissue and the nature of the damaging agent.

This review focuses on Prednisolone which is one of the synthetic glucocorticoids that has been used in endodontics for its potent anti-inflammatory effect. Prednisolone may have widespread effects on many organ systems but these effects are typically only seen at a supraphysiological doses given over a long-term period, usually more than 2 weeks.