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Annals and Essences of Dentistry

Commentary

Management of Dental Pain and Infection Using Antibiotics and Analgesics

Michael Turner*

Department of Oral Healthcare Sciences, School of Dentistry, Westbridge University, Toronto, Canada

DESCRIPTION

The use of antibiotics and analgesics is an essential component of oral healthcare, as these medications play a significant role in the management of pain and infection associated with dental diseases. Oral conditions such as dental caries, periodontal infections, periapical abscesses and post-operative complications often require pharmacological support in addition to clinical treatment. When used appropriately, antibiotics help control bacterial infections, while analgesics provide relief from pain and inflammation, thereby improving patient comfort and treatment outcomes. However, their use must be guided by sound clinical judgment to ensure safety and effectiveness.

Antibiotics are commonly prescribed in dentistry to manage or prevent the spread of bacterial infections. Oral infections often originate from dental pulp or periodontal tissues and can extend to surrounding structures if left untreated. Conditions such as acute odontogenic infections, cellulitis, periapical abscesses with systemic involvement and necrotizing periodontal diseases may require antibiotic therapy alongside definitive dental treatment. Antibiotics are also used prophylactically in selected patients with compromised immunity or certain cardiac conditions to prevent serious complications. The primary goal of antibiotic use in oral healthcare is to eliminate pathogenic microorganisms and prevent the progression of infection.

Despite their benefits, antibiotics should not be considered a substitute for proper dental treatment. Mechanical removal of the source of infection, such as drainage, root canal therapy, or extraction, remains the cornerstone of managing most dental infections. Inappropriate or excessive use of antibiotics can lead to adverse effects, including allergic reactions, gastrointestinal disturbances and the development of antibiotic resistance. Antibiotic resistance is a growing global concern and poses a serious threat to public health. Therefore, dentists must prescribe antibiotics only when clearly indicated, select the appropriate drug, dosage and duration and educate patients on the importance of completing the prescribed course.

Analgesics, on the other hand, are widely used in oral healthcare to manage pain associated with dental conditions and procedures. Dental pain can arise from inflammation, infection, trauma, or surgical interventions. Effective pain control is essential for improving patient satisfaction and encouraging timely dental care. Commonly used analgesics in dentistry include non-opioid drugs such as paracetamol and Nonsteroidal Anti-Inflammatory Drugs (NSAIDs), which help reduce pain and inflammation. These medications are often sufficient for managing mild to moderate dental pain.

NSAIDs are particularly effective in dentistry because they target the inflammatory processes responsible for pain and swelling. They are commonly prescribed after tooth extractions, periodontal procedures and endodontic treatments. Paracetamol is another widely used analgesic due to its safety profile and effectiveness in pain control, especially in patients who cannot tolerate NSAIDs. In cases of severe pain, combination therapy may be considered, but careful assessment is required to minimize the risk of side effects. Opioid analgesics are rarely indicated in dental practice and should be used with extreme caution due to their potential for dependence and adverse effects.

The rational use of antibiotics and analgesics requires careful evaluation of the patient's medical history, age, allergies and existing systemic conditions. Patients with liver or kidney disorders, gastrointestinal diseases, or a history of drug hypersensitivity require special consideration when prescribing medications. Drug interactions must also be considered, particularly in patients taking multiple medications for chronic conditions. Individualized treatment planning ensures that medications are both safe and effective for each patient.

Patient education is a critical aspect of medication use in oral healthcare. Dentists must clearly explain the purpose of prescribed drugs, the correct method of administration and possible side effects. Patients should be advised not to self-medicate or misuse antibiotics and analgesics, as improper use can mask symptoms, delay diagnosis and worsen underlying conditions. Educating patients about non-pharmacological pain management strategies and the importance of follow-up visits further enhances treatment success.

Correspondence to: Michael Turner, Department of Oral Healthcare Sciences, School of Dentistry, Westbridge University, Toronto, Canada, E-mail: michael.turner@westbridge.edu

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CONCLUSION

In conclusion, antibiotics and analgesics are valuable tools in oral healthcare when used judiciously and responsibly. Antibiotics help control bacterial infections, while analgesics provide effective pain relief, contributing to improved patient comfort and recovery. However, inappropriate use can lead to serious consequences, including drug resistance and adverse reactions. Dentists play a vital role in ensuring the rational use of these medications through accurate diagnosis, appropriate prescription and patient education. By integrating pharmacological therapy with definitive dental treatment, oral healthcare professionals can achieve optimal clinical outcomes and promote safe, effective patient care.