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THE IMPORTANCE OF ANALGESIC USE IN WISDOM TOOTH EXTRACTION TECHNIQUES

Keywords: Wisdom tooth extraction, analgesics, NSAIDs, opioids, postoperative pain, pain management, side effects, recovery, patient outcomes.

Introduction

Wisdom tooth extraction is a routine dental procedure that frequently results in postoperative discomfort. This pain arises due to the surgical trauma and subsequent tissue healing. Effective pain management is essential to enhance patient comfort, accelerate recovery, and minimize complications. Analgesic medications, including nonsteroidal anti-inflammatory drugs (NSAIDs) and opioids, are frequently utilized to alleviate postoperative pain. However, the choice of analgesic regimen must balance efficacy with the potential for adverse effects. Inadequate pain control can lead to prolonged discomfort, delayed healing, and even the development of chronic pain conditions. This study aims to analyze the significance of analgesic use in wisdom tooth extraction and its impact on pain management and patient outcomes. Additionally, the research explores alternative pain management strategies that could enhance recovery and reduce dependency on opioids.

Methods

A retrospective study was conducted involving 200 patients who underwent wisdom tooth extraction at a dental clinic. These patients were categorized into two groups: one group received a combination of NSAIDs (ibuprofen 400 mg) and opioids (codeine 30 mg), while the other group was prescribed only NSAIDs (ibuprofen 400 mg). Pain intensity was evaluated at 24, 48, and 72 hours postoperatively using the Visual Analog Scale (VAS), which measures pain on a scale of 0 (no pain) to 10 (severe pain). Additionally, adverse effects such as nausea, dizziness, and drowsiness were recorded.

Inclusion criteria included patients aged 18-40 years with no contraindications to NSAIDs or opioids. Patients with underlying chronic pain conditions, previous opioid dependence, or a history of gastrointestinal disorders were excluded from the study. Data analysis was performed using statistical software to determine significant differences between the two groups, with a focus on pain reduction and reported side effects.

Results

Pain Levels:

Time (hours)	NSAID + Opioid (VAS Score)	NSAID-only (VAS Score)
24	2.1	4.3

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48	1.8	3.8
72	1.5	3.5

Adverse Effects:

Side Effect	NSAID + Opioid Group (%)	NSAID-only Group (%)
Nausea	15%	3%
Dizziness	10%	2%
Drowsiness	12%	1%

Patient Satisfaction:

Satisfaction Level	NSAID + Opioid Group (%)	NSAID-only Group (%)
Highly Satisfied	75%	55%
Moderately Satisfied	20%	35%
Dissatisfied	5%	10%

Discussion

The study findings suggest that a combination of NSAIDs and opioids provides superior pain relief compared to NSAIDs alone within the initial 72 hours following wisdom tooth extraction. The use of opioids contributed to greater pain reduction but was associated with a higher incidence of side effects, including nausea, dizziness, and drowsiness. This highlights the importance of cautious opioid prescription, especially in patients susceptible to adverse reactions. While NSAIDs alone were less effective in pain management, they exhibited minimal side effects, making them a safer alternative for many patients.

The results also indicate that patient satisfaction was higher in the NSAID + opioid group due to greater pain relief. However, a significant percentage of patients reported discomfort due to opioid-induced side effects, emphasizing the need for a balanced approach to postoperative pain control. Given the global concerns about opioid dependency, dentists should consider alternative pain management methods, such as local anesthetics, adjunctive therapies like cryotherapy, and non-pharmacological interventions including cognitive-behavioral therapy (CBT) and acupuncture.

Current guidelines recommend NSAIDs as the first-line therapy for mild to moderate pain management, reserving opioids for cases where pain is severe or unresponsive to NSAIDs. Future research should focus on optimizing multimodal analgesic strategies, including the potential role of acetaminophen, alternative drug combinations, and non-opioid analgesics. Exploring genetic factors that influence pain tolerance and analgesic metabolism may also provide valuable insights into personalized pain management approaches.

Conclusion

In summary, the administration of analgesics plays a crucial role in postoperative pain control following wisdom tooth extraction. While the combination of NSAIDs and opioids offers more

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effective pain relief, it also carries the risk of adverse effects. Individualized pain management strategies, guided by patient-specific factors, are essential for achieving optimal outcomes. The results of this study support the use of NSAIDs as a primary treatment modality, with opioids reserved for select cases requiring stronger pain relief. Additionally, future research should focus on refining pain management protocols by incorporating non-opioid alternatives and patient-centered approaches to minimize risks associated with opioid use.

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