



ERAS (Enhanced Recovery After Surgery) Protocol in Oral and Maxillofacial Surgery: Narrative Review

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REVIEW ARTICLE

ABSTRACT

Introduction: Oral and maxillofacial surgery is a specialty that involves the diagnosis and treatment of pathologies related to the oral cavity, mandible, jaws and facial structures. In recent years, the ERAS (Enhanced Recovery After Surgery) Protocol has been implemented in various surgical areas with the aim of optimizing postoperative recovery. **Objective:** To understand the impact of this approach on the patient experience and clinical outcomes. **Methodology:** This narrative review was conducted through a systematic search of the PubMed, Scopus and Google Scholar databases. The aim was to identify studies investigating the implementation of the ERAS Protocol in oral and maxillofacial surgery. **Results:** The studies reviewed showed that the implementation of the ERAS Protocol in oral and maxillofacial surgery resulted in a significant reduction in the length of hospital stay, with patients being discharged in 1 to 2 days. In addition, pain control was improved, with a reduction in the use of opioids by up to 50%. The reduction in post-operative complications, such as infections and respiratory problems, was another benefit observed, with a reduction of up to 40% in these complications. **Discussion:** The adoption of the ERAS Protocol has shown promising results in the recovery of patients undergoing oral and maxillofacial surgery. The benefits include better pain management, early mobilization and lower complication rates. **Conclusion:** The ERAS Protocol in oral and maxillofacial surgery has the potential to transform surgical practice, promoting faster and more effective recovery. More studies are needed to standardize its implementation and evaluate its long-term effects.

Palavras-chave: Enhanced Recovery After Surgery. Pain Management. Early Ambulation. Dentistry



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INTRODUCTION

Oral and maxillofacial surgery is a specialty that deals with the diagnosis and treatment of conditions affecting the oral cavity, mandible, jaws and associated facial structures. This area covers a wide range of procedures, from aesthetic interventions, such as orthognathic surgery, to the removal of tumors, facial trauma and the correction of congenital deformities. Despite technological advances and modernized surgical techniques, oral and maxillofacial procedures still present significant challenges, including pain management, functional recovery and the prevention of postoperative complications (Singh & Ahluwalia, 2018; Haviland & Moe, 2021).

Historically, patients undergoing oral and maxillofacial surgery experienced prolonged recovery times, which often involved intense pain, discomfort and an increased risk of complications, such as infections and breathing difficulties. Such issues not only impact physical health, but also affect patients' psychological well-being and quality of life. In this context, the ERAS (Enhanced Recovery After Surgery) Protocol emerged, an approach that aims to transform the surgical experience by implementing evidence-based strategies that optimize recovery (Jani et al., 2023).

Initially developed for colorectal surgery, the ERAS Protocol has gained popularity in various surgical specialties due to its proven benefits. The philosophy of the protocol is patient-centered, seeking to minimize surgical stress and promote a faster and more effective recovery. This is achieved through the integration of multiple interventions, including patient education, optimization of nutrition, effective pain management, early mobilization and strict fluid control. Each of these interventions is grounded in scientific data that demonstrates their effectiveness in improving surgical outcomes and reducing length of stay (Ashok et al., 2020; Bansal et al., 2022).

The adoption of the ERAS Protocol in oral and maxillofacial surgery is an emerging area of research, and although initial studies are promising, the implementation of the protocol still faces challenges, such as resistance to changes in traditional clinical practices and the need for training and collaboration between members of the healthcare team. It is essential that professionals in the field understand the importance of a multidisciplinary approach and are willing to adapt their practices

to include the interventions of the ERAS Protocol (Bär et al., 2024).

Understanding the impact of this approach on the patient experience and clinical outcomes is key to improving care in oral and maxillofacial surgery and promoting a smoother and more efficient recovery.

METHODOLOGY

For this narrative review, a systematic search was conducted in relevant scientific databases, including PubMed, Scopus and Google Scholar, with the aim of identifying studies that explored the implementation and results of the ERAS Protocol in oral and maxillofacial surgery. The search was conducted using a combination of keywords including "ERAS", "Enhanced Recovery After Surgery", "oral and maxillofacial surgery", "postoperative recovery", "pain management" and "early mobilization". This search strategy allowed for a comprehensive collection of literature on the subject.

The inclusion criteria were set to select original articles, systematic reviews and case studies published in the last ten years, focusing on publications that discussed the effectiveness of the ERAS Protocol in various oral and maxillofacial surgical procedures. Articles that addressed the implementation of protocol strategies, as well as clinical outcomes and patient satisfaction, were prioritized. Publications that did not present empirical data or were not available in English or Portuguese were excluded from the analysis.

After collecting the articles, a qualitative analysis of the data was carried out. The content of the studies was organized into central themes, such as patient education, preoperative nutrition, pain management, early mobilization and clinical outcomes. This analysis made it possible to identify patterns and trends in the literature, as well as to highlight the effectiveness of the ERAS Protocol interventions in the recovery of patients undergoing oral and maxillofacial surgery. In addition, the ethical aspects associated with the research were considered, ensuring that the studies reviewed had been conducted with the approval of the appropriate ethics committees, respecting the rights of the patients and the confidentiality of the data.

RESULTS

The implementation of the ERAS Protocol in oral and maxillofacial surgery has shown a number of significant benefits, as evidenced in the studies reviewed. Firstly, the adoption of this protocol resulted in a notable reduction in the length of hospital stay. On average, patients who followed the protocol were discharged in 1 to 2 days after surgery, compared to 3 to 5 days for those who did not undergo ERAS interventions. This decrease in length of stay not only reduces hospital costs, but also minimizes the risk of complications associated with prolonged hospital stays (Blumenthal et al., 2024; Coyle et al., 2016).

In addition, postoperative pain management has been vastly improved. The use of multimodal pain management strategies, such as the combination of oral analgesia and regional nerve blocks, resulted in significantly lower pain levels in the first 24 to 48 hours after surgery. Patients who adhered to the ERAS Protocol reported a decreased need for opioids, with a 30% to 50% reduction in the consumption of these drugs. This approach not only improved the patient's experience of pain, but also decreased the incidence of unwanted side effects associated with opioid use (Martins et al., 2023; Pourtaheri et al., 2022).

Another important finding was the reduction in post-operative complications. Studies have indicated that the rate of infections, respiratory complications and other morbidities was significantly lower in patients who followed the ERAS Protocol. In some studies, the incidence of complications was reduced by up to 40% when compared to control groups that did not follow the protocol. In addition, patient satisfaction has been measured in several studies, with satisfaction rates of over 85% among those who took part in the ERAS Protocol, highlighting the importance of the patient experience throughout the surgical process (Grillo et al., 2024; Højvig et al., 2022).

DISCUSSION

The results of implementing the ERAS Protocol in oral and maxillofacial surgery show a significant improvement in patient recovery. This approach integrates several interventions that have proven effective in various surgical specialties, but its

application in oral and maxillofacial surgery offers specific benefits that are worth highlighting. Patient education, for example, is a fundamental strategy that prepares individuals for the surgical experience, reducing anxiety and increasing adherence to treatment. Informing patients about what to expect before, during and after surgery can result in a more positive emotional state and a better overall experience (Turkdogan et al., 2022; Kessels, 2003).

Pain management is another crucial aspect of post-operative recovery. The use of regional nerve blocks, such as the inferior alveolar nerve block, not only improves pain control, but also reduces the need for opioids, minimizing their side effects. This multimodal approach reflects a growing movement in clinical practice to prioritize less invasive and safer strategies for pain management, promoting a faster and more comfortable recovery (Mongia et al., 2024; Evans et al., 2024; Selvido et al., 2021; Kehlet, 1997).

Early mobilization also stood out as a vital intervention within the ERAS Protocol. Encouraging patients to get up and move around soon after surgery not only helps prevent respiratory complications such as atelectasis and pneumonia, but also improves circulation and bowel function. This early mobilization is especially important in oral and maxillofacial surgery, where respiratory function and nutrition are essential for a proper recovery (Yang et al., 2020; Dang et al., 2017).

However, the implementation of the ERAS Protocol in oral and maxillofacial surgery faces challenges. Resistance to changing traditional practices and the need for training and adaptation of the multidisciplinary team are obstacles that need to be overcome to ensure adherence to the protocol. In addition, personalizing treatment to meet the specific needs of each patient is crucial, considering that responses to interventions can vary. Ongoing training and the involvement of all members of the healthcare team are key to the successful adoption of the ERAS Protocol.

CONCLUSION

In conclusion, the application of the ERAS Protocol in oral and maxillofacial surgery represents a significant innovation in surgical practice, with the promise of

optimizing patient recovery and improving the quality of care. The benefits observed, such as reduced length of stay, improved pain management and fewer post-operative complications, highlight the importance of this integrated approach. Although the current results are promising, it is essential that more research is carried out to standardize the implementation of the ERAS Protocol in oral and maxillofacial surgery and to evaluate the long-term results. The widespread adoption of these practices could transform the surgical experience, providing a faster recovery and a better quality of life for patients undergoing oral and maxillofacial interventions.

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