

Pain Management in Plastic Surgery



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KEYWORDS

• Pain management • Plastic surgery • Multimodal analgesia

KEY POINTS

- Poorly controlled postoperative pain is associated with worse clinical outcomes and negative patient experiences.
- Plastic surgeons must be well versed in multimodal analgesia (MMA) management strategies to optimize postoperative pain control and minimize narcotic use.
- MMA regimens are customized to the patient and procedure.
- Local anesthetics, regional blocks, and epidurals are powerful adjuncts in any MMA regimen.
- Plastic surgeons must be aware of dosing and contraindications for all medications used as part of an MMA regimen.

INTRODUCTION

Postoperative pain management in plastic surgery has become a topic of increasing interest. Pain is the perceived sensory and emotional reaction to actual or perceived tissue injury.¹ Nociceptive pain is caused by suprathreshold stimulation of peripheral pain receptors from damage to nonneural tissue.² Inflammatory pain results from peripheral pain sensitization caused by activation of the immune system via chemical mediators. Surgery causes tissue injury that leads to both nociceptive and inflammatory pain. Pathologic pain is caused by dysfunction of the nervous system without tissue damage; it is maladaptive in that it serves no biological function.³

Uncontrolled postsurgical pain has been associated with increased risk of poor pulmonary function, myocardial ischemia, ileus, thromboembolism, and impaired immune function.^{4,5} It has been associated with increased postanesthesia care unit stays, prolonged admissions, and

increased readmission rates, all of which may affect reimbursement and patient satisfaction.^{6–11} Uncontrolled postsurgical pain has also been implicated in the development of persistent postsurgical pain (PPSP) caused by maladaptive neuronal plasticity.^{12,13} PPSP is estimated to affect 20% to 25% of mastectomy patients, 50% to 85% of amputation patients, and 5% to 35% of hernia repair patients.^{14,15}

In the era of the American opioid epidemic, surgeons play a crucial role in optimizing postoperative pain and minimizing narcotic use. Nonpharmacologic pain management strategies such as mindfulness, massage, and acupuncture have been found to be effective pain management strategies and should be used.¹⁶ This article reviews pain management strategies available to plastic surgeons based on therapeutic class of medication and provides a framework for pain management based on Enhanced Recovery After Surgery (ERAS) protocols. Much of this content was previously covered in a *Plastic and Reconstructive Surgery* Pain Management Supplement

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