PAIN AND PLASTIC SURGERY: HOW TO AVOID COMPLICATIONS ON THE PATH TO PERFECTION

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Annotation. Postoperative pain is a key issue in plastic surgery, especially after major procedures. It may delay discharge and become chronic in 10–40% of cases. Pain management relies on non-opioid drugs and regional analgesia; opioids are used if needed.

Keywords: plastic surgery, perioperative pain management, non-opioid analgesics, regional analgesia

When selecting an analgesia regimen, especially in plastic surgery, it is important to consider the etiopathogenetic features of postoperative pain. The primary goal is to control dynamic pain to enable early patient mobilization. This is best achieved with non-opioid analgesics and regional anesthesia. A preventive, scheduled analgesic approach is more effective than patient-controlled, as-needed administration.[1]

In major surgery, opioids remain the mainstay of postoperative analgesia, despite evidence linking them to increased postoperative complications and mortality. Overall, adverse effects occur in approximately 17% of patients.[2]

In plastic surgery, opioids are considered reserve drugs, used only when non-opioid analgesia is insufficient or breakthrough pain occurs. Their use is often associated with nausea and vomiting, which may lead to subcutaneous hematomas, particularly after facelift procedures. Opioids also delay early mobilization, increasing the risk of thromboembolic complications, which can be especially severe in plastic surgery.[3]

In day-case surgery, opioid analgesics—except fentanyl—are generally discouraged. Most plastic procedures are superficial, not involving muscle tissue,

and effective pain control can typically be achieved with non-opioid analgesics such as NSAIDs, paracetamol, and nefopam.[4]

Plastic surgeons have traditionally been cautious about NSAIDs due to concerns about increased bleeding and hematoma formation. However, evidence-based research does not support these concerns. A 2014 meta-analysis published in *Plastic and Reconstructive Surgery*, involving 27 randomized controlled trials and 2,314 patients receiving postoperative ketorolac, found no increased risk of hematoma compared to those not treated with NSAIDs. [5]

Glucocorticoids have strong immunomodulatory and anti-inflammatory properties, helping to reduce pain and inflammation. Dexamethasone also lowers the incidence of postoperative nausea and vomiting (PONV). In 2014, the American Society of Ambulatory Anesthesia recommended 4–8 mg IV dexamethasone for PONV prevention. A meta-analysis of 45 studies showed that intraoperative dexamethasone (1.25–20 mg) reduced pain intensity and opioid requirements for up to 24 hours postoperatively.[6]

Conclusions: Effective postoperative pain management in plastic surgery prioritizes early mobilization and minimizing complications. Non-opioid analgesics and regional anesthesia form the foundation of current protocols, with opioids reserved for breakthrough pain due to their association with adverse effects, including nausea, vomiting, and delayed recovery. Despite concerns, NSAIDs like ketorolac have been shown to be safe in terms of bleeding risk. Additionally, dexamethasone offers both anti-inflammatory benefits and significant reduction in postoperative nausea, pain intensity, and opioid use. A preventive, scheduled analgesia strategy is preferred over patient-controlled administration.

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