



Clinical Practice Guidelines for Acute Post-operative Pain Management in Pakistan

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These guidelines were developed jointly by the Society for the Treatment and Study of Pain (STSP), Pakistan and the Faculty of Pain Medicine, College of Physicians and Surgeons Pakistan, using two contemporary international guidelines as primary sources. This framework **aims** to promote safe, consistent, patient-centered postoperative pain management across teaching hospitals in Pakistan.

1. Service organization and governance

1.1 Every hospital performing major surgery should have an organized Acute Pain Service (APS), led by an anaesthesiologist and supported by multidisciplinary participation, for the coordination and management of acute postoperative pain.

1.2 The APS should be appropriately resourced and should have defined responsibility for postoperative pain management, staff education, development and implementation of institutional analgesia protocols, monitoring of clinical practice and outcomes, and provision of appropriate patient information and documentation.

1.3 Arrangements should also ensure timely access to senior consultant or pain management team, particularly for patients whose pain does not follow the expected recovery trajectory or who require advanced analgesic techniques.

2. Preoperative education and shared decision-making

2.1 Pain education must be provided to patients and their families preoperatively. This should cover the side effects of untreated pain, the importance of pain management, the use of pain assessment tools, pain treatment plans and potential adverse effects. The goal is to improve analgesic effectiveness and patient satisfaction.

2.2 Patients should be provided with realistic expectations regarding peri-operative pain. All information should be given both orally and in written format as a reminder of the discussion.

3. Preoperative risk assessment and individualized planning

3.1 Identify and address the following preoperative risk factors for acute postoperative pain including young age, female gender, high BMI, low education level, diabetes, history of smoking, ASA classification of III and above, sleep disorders, anxiety, preoperative depression, preoperative opioid use, high expectation of postoperative pain, and pain catastrophizing. In addition, patients should be screened preoperatively for other modifiable risk factors for severe acute pain and chronic postsurgical pain, including frailty, alcohol use, drug use and anticipated prolonged surgery.

3.2 Patients at risk of persistent postoperative opioid use, pre-existing chronic pain and high risk of severe postoperative pain should be identified pre-operatively and a multidisciplinary analgesic plan developed between the acute pain service, surgical and anaesthetic teams and the patient. This should involve discussing the potential risks and benefits of peri-operative pain management options, including regional anaesthetic techniques, particularly in patients with previous history of poorly controlled pain or those already on opioids.

3.3 Where possible, patients taking high doses of opioids should be referred for pre-admission opioid tapering by the Acute Pain team, Psychiatrist or Psychologist.

4. Pain assessment

4.1 Single-dimensional tools such as Visual Analog Scale (VAS), Numerical Rating Scale (NRS), Faces Pain Scale (FPS), and Verbal Descriptor Scale (VDS) are recommended for rapid assessment of acute postoperative pain.

4.2 Throughout the peri-operative pathway, pain assessment should be used to guide analgesic management.

5. Multimodal, pre-emptive and non-pharmacological analgesia

5.1 Multimodal analgesia, initiated pre-emptively where appropriate, is recommended to reduce postoperative pain and opioid consumption. It should be continued for sufficient duration to extend analgesia into the postoperative period.

5.2 Multimodal analgesia should include, where appropriate and not contraindicated, paracetamol, non-steroidal anti-inflammatory Drugs (NSAIDs), regional analgesia, and selected adjuncts such as NMDA receptor antagonists, α 2-adrenergic agonists, dexamethasone and lidocaine, to reduce opioid requirements and opioid-related adverse effects.

5.3 Throughout the peri-operative pathway, simple non-pharmacological strategies to reduce the risk and severity of postoperative pain should be encouraged. These include peri-operative education, humanistic communication, avoidance of nocebo, mindfulness and meditation,

cognitive behavioural therapy, pre-operative and postoperative physiotherapy, activity and exercise, acupuncture and transcutaneous electrical nerve stimulation (TENS) in selected patients where appropriate.

6. Procedure-specific and personalized analgesia

Postoperative analgesia should be individualized according to the type of surgery, patient factors, and expected severity of postoperative pain, using evidence-based, procedure-specific recommendations where available.

7. Non-opioid systemic analgesics

7.1 Paracetamol and NSAIDs are recommended as part of multimodal postoperative analgesia in patients without contraindications, to improve analgesia and reduce opioid use.

7.2 The combined use of paracetamol and NSAIDs is superior to monotherapy where indicated.

7.3 NSAIDs should be selected according to individual patient factors and clinical circumstances, including age, renal function, cardiovascular and gastrointestinal risk, hydration status, concurrent medications and bleeding risk. Options include non-selective NSAIDs such as ibuprofen, diclofenac and ketorolac, and selective cyclo-oxygenase 2 inhibitors (COX2i) such as celecoxib. Long-term NSAID use is associated with gastritis and cardiovascular complications.

8. Opioid Analgesics

Opioids remain essential for managing moderate-to-severe acute postoperative pain; however, their use should be individualized according to patient needs, local availability, institutional resources, and the capacity for safe monitoring.

9. Opioid stewardship and prescribing

9.1 When analgesics, including opioids are used, they should be administered at the lowest effective dose, preferably by the oral route where feasible, with initial doses appropriate to the patient's age and clinical condition. Opioids should be used as part of a multimodal analgesic strategy rather than routinely as the sole analgesic approach.

9.2 Modified-release formulations and compound opioid preparations should not be used routinely for acute postoperative pain.

10. Prevention and management of opioid-related adverse effects

10.1 Patients receiving opioids should be appropriately monitored for sedation, respiratory rate, oxygen saturation, haemodynamic effects, nausea, vomiting, and other opioid-related

adverse effects, with timely escalation of care when required. Sedation should be monitored as an early indicator of opioid-induced ventilatory impairment.

10.2 In case of respiratory depression or excessive sedation, reduce or stop opioids, maintain airway patency, administer naloxone if needed

10.3 If opioids are used at any stage of the peri-operative pathway, drugs to prevent or manage opioid related adverse effects should also be prescribed or made readily available as clinically appropriate, such as anti-emetics, opioid antagonists and laxatives.

10.4 For patients at risk of postoperative nausea and vomiting, prophylactic antiemetics such as 5-HT₃ antagonists, corticosteroids, dopamine antagonists, or NK-1 antagonists are recommended. Patients at higher risk should receive combination prophylaxis using agents from different classes.

10.5 The co-administration of sedative drugs should be avoided if possible. If unavoidable, the lowest effective doses should be used for the shortest possible duration, with careful monitoring for signs of opioid-induced ventilatory impairment.

11. Regional and Neuraxial Analgesia

11.1 Procedure-specific regional analgesia, including peripheral nerve blocks where clinically appropriate, should be considered an important component of multimodal analgesia to improve postoperative pain control, reduce opioid requirements, and reduce nausea and vomiting.

11.2 Epidural analgesia may provide superior postoperative analgesia in selected thoracic and abdominal surgeries but requires caution due to potential side effects.

11.3 Peripheral nerve blocks should be preferred over epidural analgesia for the lower limb surgery where clinically appropriate.

11.4 Protocols and support for managing regional anaesthesia should be available throughout the hospital.

12. Breakthrough and Rebound pain

12.1 Paracetamol may be considered as part of multimodal analgesia to reduce the risk of postoperative breakthrough pain.

12.2 If breakthrough pain occurs, opioids may be used as rescue analgesia for postoperative breakthrough pain.

12.3 In patients at high risk of rebound pain, preventive strategies may include intraoperative intravenous dexamethasone or ketamine, continuous nerve blocks, and multimodal analgesia.

13. Post-anaesthesia Care Unit (PACU) management

13.1 Anaesthesia / Pain Management staff must be contactable and available during and outside routine daytime working hours to support provision of analgesia in the PACU.

13.2 In the PACU, short-acting intravenous opioids may be used when required.

14. Day surgery Analgesia

14.1 Paracetamol or NSAIDs recommended for mild postoperative pain following day surgery.

14.2 For moderate to severe pain in day surgery patients, Paracetamol and/or NSAIDs combined with local infiltration or peripheral nerve blocks are recommended, with opioids if needed.

15. Analgesia in Elderly Patients

15.1 NSAIDs, Paracetamol and peripheral nerve blocks are recommended for postoperative analgesia in elderly patients without contraindications.

15.2 Postoperative opioid doses should be appropriately reduced to prevent excessive sedation in elderly patients.

16. Critical Care Pain Management

16.1 Frequent assessment of pain should be conducted in the critical care setting using pain scales validated for use in the ICU including the Behavioural Pain Scale (BPS) and the Critical Care Pain Observation Tool (CPOT) for patients who are unable to self-report.

16.2 Pain should be considered a possible contributing factor in agitation or delirium in patients who are critically ill.

16.3 Patients on opioid infusions for ≥ 72 h should be reviewed and monitored for opioid withdrawal.

16.4 Painful procedures in the ICU should be anticipated and appropriate analgesia provided before the procedure.

16.5 In patients receiving opioid infusions, the lowest effective opioid dose should be used, with frequent assessment of pain and opioid-related adverse effects.

17. Discharge Prescribing, Patient Information and Follow-Up

17.1 There should be local institutional protocols for the prescription of discharge analgesic medicines after surgery, of no greater than 7 days duration, with guidance for patients on how to seek support for any ongoing pain management needs after 7 days.

17.2 Before prescribing opioids at discharge, discuss with the patient, the risks and features of tolerance, dependence and addiction and agree together a treatment strategy and plan for the discontinuation.

17.3 Patient information should be available, with advice on how to take and reduce analgesic drugs, safe disposal of unused medicines, and the risks of driving/operating machinery while taking opioid medicines. If patients have received regional nerve blocks, appropriate information on block-related precautions and when to seek help should be provided.

17.4 If an opioid is prescribed at discharge, the discharge summary must explicitly state the recommended opioid, indication, dose and duration.

17.5 If postoperative pain is un-manageable at home, patients should be referred to the surgical team or appropriate hospital service for review.

References

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