

The combination of the IV NSAID ketorolac and morphine using a PCA device is frequently prescribed after thoracic surgery. Morphine delivered by PCA leads to a lower total dosage of opioid analgesia when compared with the administration of intermittent doses of analgesic as required. After bowel surgery, a mixture of a local anesthetic (bupivacaine) and a low-dose opioid (fentanyl) delivered by epidural route improves the rate of recovery and minimizes the gastrointestinal effects (e.g., bowel stasis, nausea, vomiting). Once bowel function has been restored, oral opioids (such as immediate release and controlled release preparations) are preferred in older children. Controlled-release opioids facilitate ATC dosing and improve sleep. They are also associated with a lower incidence of nausea, sedation, and breakthrough pain.

Burn Pain

Because burn pain has multiple components, involves repeated manipulations over the injured painful sites, and has changing patterns over time, it is difficult and challenging to control. Burn pain includes a constant background pain that is felt at the wound sites and surrounding areas. Burn pain is exacerbated (breakthrough pain) by movements, such as changing position, turning in bed, walking, or even breathing. Areas of normal skin that have been harvested for skin grafts (donor sites) also are painful. Pain is commonly experienced with intense tingling or itching sensations when skin grafting is required. During the healing process, when the tissue and nerve regenerate, the necrotic tissue (eschar) is excised until viable tissue is reached. The healing process may last for months to years. Pain or paresthetic sensations (itching, tingling, cold sensations, and so on) may persist. In addition, discomfort may be associated with immobilization of limbs in splints or garments, as well as multiple surgical interventions such as skin grafting and reconstructive surgery.

Multiple therapeutic procedures are carried out during the course of treatment. These procedures (dressing changes, wound débridement and cleansing, physical therapy sessions) occur daily or even several times a day (see [Chapter 13](#)). Providing proper analgesia without interfering with the patient's awareness during and after the procedure is the biggest challenge in the management