

Pain Management after Head and Neck Cancer Surgery

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Introduction

Pain management after cancer surgery can be quite challenging. It must begin in the preoperative period with a discussion of the possible modalities of pain relief available and suitable for a particular patient posted for a specific onco-surgery. Head and neck cancers [1] are on the rise in the recent times, mainly related to smoking, tobacco and alcohol consumption. Radical surgery in the form of "Commando" operation with radical neck dissection is generally performed under general anaesthesia. Intravenous opioids usually provide intraoperative analgesia. Nociceptive pain results from tissue infiltration by neoplastic cells, whereas neuropathic pain can be due to nerve compression or invasion by the tumour mass. Surgery for head and neck cancer can be a cosmetic disfigurement, despite reconstructive surgery, leading to emotional trauma. Psychosomatic factors must be considered in the evaluation and treatment of pain after such radical surgeries. The advent of robotic surgery [2] has been advantageous in reducing pain and analgesic requirements.

Discussion and Flow-Charts for pain management

Multimodal analgesia and a holistic approach are the mainstay of post-operative pain relief in these patients [3]. WHO recommends usage of the oral

route unless contra-indicated. Head and neck cancer patients can be administered enteral drugs by nasogastric or gastrostomy tubes or rectal administration. When this is not possible, subcutaneous/ intravenous route or transdermal patches maybe employed. Intravenous patient controlled analgesia (IVPCA) with opioids is recommended, especially if postoperative tracheal tube retention is planned. In patients taking preoperative morphine for cancer pain, their equivalent oral and intravenous morphine requirements must be accurately calculated and administered to prevent opioid withdrawal [4].

Regional Nerve Blocks Employed Include

- Trigeminal nerve block
- Glossopharyngeal nerve block
- Cervical plexus block

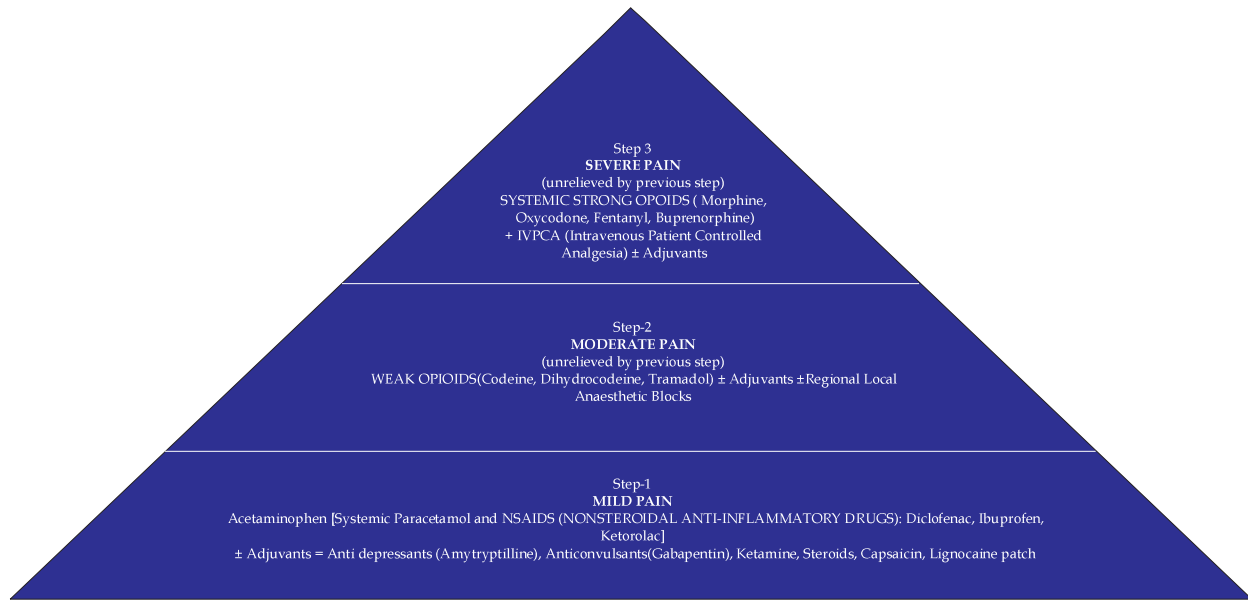
These nerve blocks maybe diagnostic, prognostic or therapeutic. Therapeutic blocks maybe non-destructive or neurolytic. The former employs bupivacaine hydrochloride 0.25%, while the latter uses alcohol or phenol for nerve destruction. Single nerve blocks to relieve pain are ineffective, since sensory innervation in the head and neck region typically arises from multiple cranial/cervical nerves. Interventional therapy is usually considered for chronic pain, unresponsive to systemic medications.

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The world health organisation (WHO) recommends a three-step pyramidal therapy for cancer pain, starting from mild pain to moderate and severe pain [5]. Progressive escalation of analgesic agents and their doses is required as one ascends the ladder, with inclusion of potent, higher dose opioids and interventional nerve blocks for intractable, unrelieved pain.

Recent evidence suggests that systemic morphine administration is associated increased incidence of cancer recurrence due to various factors, including immunosuppression [6]. Further large scale randomized controlled trials re required to elucidate pain management protocols after head and neck cancer surgeries.



A modified 3-Step ladder for acute post-operative pain management is described below, highlighting the progressive analgesic regimen for postoperative analgesia after head and neck cancer surgery.

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