

## **Introduction**

Pain is an unpleasant sensory and emotional experience arising from actual or potential tissue damage or described in terms of such damage (*Morgan M, et al; 2006*). Postoperative pain may lead to shallow breathing and cough suppression in an attempt to splint the injured site, followed by retained pulmonary secretions and pneumonia. Unrelieved pain also delays the return of normal gastric and bowel function in postoperative patient (*Wattwil M; 1989*). The physiological and psychological risks associated with untreated pain are greatest in frail patients with other illnesses such as heart or lung disease, those undergoing major surgical procedures such as aortic surgery, and the extreme of age (*Merskey H and Bogdusk N; 1994*).

Health care including pain management is both a technical and ethical enterprise. The ethical obligation to manage pain and relieve the patient's suffering is the core of a health care professional's commitment. While medical treatments often involve risk and burdens, anything harmful to the patient, including postoperative pain, should be minimized or prevented if possible. The ethical importance of pain management is further increased when additional benefits for the patient are realized, earlier mobilization, shortened hospital stay, and reduced costs. If inadequate pain management results from clinician's conflict between reducing pain and avoiding potential side effects and/or legal liability, achieving greater technical competence and knowledge of risks and benefits can help to reduce such conflicts (*Berti M, et al; 2000*).

Modern anesthesia aims at ensuring safe emergence from anesthesia with good pain control extending to the postoperative period. A good strategy to achieve this goal is to prevent rather than to treat severe postoperative pain (*Phillip Scuderi and Winston Salem ,2004*).

Morphine is the prototype opioid agonist to which all other opioids are compared. In, human, morphine, produces analgesia, euphoria, sedation and diminished ability to concentrate. Analgesic effect of morphine is most prominent with administration before the stimulus , it can be given effectively by many routes However, its effectiveness is often limited by tolerance and systemic side effects as respiratory depression specially when given neuroaxially (*Rawal N; 1997* ).

The concept of pre-emptive analgesia describes a situation where the administration of an analgesic drug or technique before the onset of a painful stimulus causes a decrease in intensity of pain felt by an individual and therefore a decrease in the need for analgesic medication, compared to the administration of analgesia after the painful stimulus (*McQuay HJ ,1998*).

This concept arises from the demonstration of neuroplasticity in the CNS, in which amplification of “wind-up”, or painful sensory input occurs leading to hyperalgesia, which may persist after the original stimulus has ended. As a consequence, it has been postulated that “wind-up’ may be minimized by decreasing the amount of painful sensory input to the CNS through the use of an analgesic technique prior to the painful stimulus, with a resulting decrease in the requirements for postoperative analgesia (*McQuay Hj and Dickenson AH ;2002*).