INTRODUCTION AND AIM OF THE WORK

Nalbuphine is an opioid antagonist of the phenanthrene series related to naloxone and oxymorphone. It is claimed to produce good analgesia with fewer side effects than morphine (Wandless, 1987). The analgesic potency of nalbuphine is equal to that of morphine on a milligram basis (Fragen and Caldwell, 1977).

The respiratory depressant capacity of intravenous nalbuphine a potent analgesic of the narcotic antagonist type and morphine were compared by Romagnoli and Keats, (1980) and they concluded that nalbuphine in increments to a total of 60mg/kg, doses in excess of 30 mg/kg failed to increase respiratory depression beyond that induced by morphine 20 mg/kg. A ceiling effect for respiratory depression previously known to exist only for nalorphine was thereby demonstrated to apply to nalbuphine.

Nalbuphine is said to produce a 30-40% incidence of sedation which is a traditional aim of premedication (Pinnock et al., 1985).

The opioid drugs remain the most common premedication agents although opinions are divided on whether or not they have any effect on anxiety. Anxiolysis, analgesia and amnesia are suggested as desirable in certain categories of patients. Nalbuphine may certainly be recommended as an effective sedative premedication (Pinnock et al., 1985).
Reports have documented use of the agonist-antagonist nalbuphine as a supplement to surgical anaesthesia. Its use has been reported to reduce the minimum alveolar concentration (MAC) requirement of enflurane (Dumas, 1985).

Fahmy et al., (1982) reported that nalbuphine is an effective intraoperative analgesic associated with haemodynamic stability. Postoperative side effects were significantly lower with nalbuphine. These include lack of respiratory depression and lower incidence of nausea and vomiting. Recovery room stay was also shorter with nalbuphine rather than morphine.

Postoperative pain may be a dull steady pain at rest or a more severe stabbing pain on movement (Wallace and Norris, 1975). In critically ill patients the management of pain in postoperative period is very complicated and troublesome. They are very unstable and unpredictable in terms of response to drugs, stimulation and stress (Kururattapun and Prakanrattana, 1986).

The conventional drugs for postoperative analgesic which usually are narcotic agonists such as morphine and meperidine produce hypotension, respiratory depression as well as drug addiction (Jaffe and Martin, 1980).

In searching for an appropriate analgesic agent to relieve postoperative pain nalbuphine was chosen. It has approximate equi-analgesic potency as morphine with less cardiovascular depression and
exhibits a ceiling effect for respiratory depression (*Beaver and Feise, 1978*).

The aim of this work is:

- To evaluate nalbuphine as a premedicant regarding its sedative effect and the cardiovascular and respiratory changes which may accompany its use.
- To study its effects as a component of balanced anaesthesia and its haemodynamic and hormonal effects compared to other analgesics.
- To assess its effects as a postoperative analgesic compared to other analgesic morphine.