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Editorial I

MANAGEMENT OF ACUTE PAIN IN THE EMERGENCY ROOM

The emergency room is one of the busiest places in the hospital with patients being wheeled in and out, many pieces of equipment and a lot of people moving around. It is also a place where there is bound to be a lot of noice partly due to the activity and partly due to patients who are in pain. Unless the patient is unconscious a great majority of acutely ill patients especially the victims of trauma are in pain even though this aspect of patient care is most often neglected specially in this part of the world. Some may argue that there are good aspects of pain. No doubt it immobilises the patient thereby preventing further injury, it also makes the diagnosis easier as the site is known but we are all in agreement that in this day and age a patient should not be allowed to suffer pain. This is apart from the fact that in the modern age this might be considered a right of the hospitalized patient. In the emergency department with all the excitement and activity this aspect of patient care tends to get neglected.
Therefore we need to be highly motivated if we are to relieve pain in the emergency department.

Why is Pain so common in the emergency department?
Pain is associated with tissue damage and this is true not only in trauma but also in ischaemia and hypoxia. Pain is subjective and as a result is aggravated when associated with anxiety. Patients subjected to trauma will be anxious, as they may fear deformity and disability. Others may be frightened due to loss of life and limb. Still others especially children will be frightened of the hospital environment which they are not familiar with.

Does the extent of pain always relate to the severity of injury?
It has been shown by Melzack that only 20% of patients felt that it was exactly right. 40% felt that it was disproportionately severe than the injury while the other 40% felt that it was less than expected.

Why do we need to treat pain?
We all know that if you allow a patient to be in pain without relief, the patient gets exhausted due to loss of appetite and lack of sleep. There will be sympathetic stimulation that may further compromise tissue perfusion in an already hypovolaemic patient resulting in further tissue hypoxia. This will increase morbidity and mortality. Pain has also been found to cause stress ulceration and immunosuppression.

International association for the study of pain defines pain as an unpleasant sensory and emotional experience associated with actual or potential tissue damage. Tissue damage stimulates nociceptors. The A delta fibers and the C fibers carry the signal in the form of impulses to the spinal cord. Other sensory fibers are involved in post injury inflammation. The impulses ascend in the spino thalamic tracts to the thalamus in the brain and to the cortex thereafter. The descending fibers modify the pain in the lamina of the spinal cord. The spino reticular pathway is associated with the unpleasantness of pain.

In the emergency room we need to treat the life threatening injuries associated with airway, breathing, circulation and disability. Thereafter we need to consider analgesia in appropriate measure. Nursing care is very important in pain management, as it is necessary to assess the severity of pain and administer analgesics so that the patient is made comfortable. This will ensure good breathing, effective gas exchange, a good cardiac output, adequate tissue oxygenation, aerobic metabolism, optimal enzyme activity and

good cell survival. It will reduce autonomic activity and lactate accumulation.

Drugs that can be commonly used in the emergency room for pain relief are ketamine, opioids, NSAIDS and local anaesthetics. Ketamine can be used in a dose of 0.2 mg /kg intravenously without its side effects of hypertension, tachycaria, raised intraocular and intracranial pressures. The advantages are bronchodilatation and no respiratory depressant effects. Opioids can be used intravenously for its excellent analgesia and the feeling of well-being. It is best to avoid intramuscular injections. It is used in patients with myocardial infarctions, ectopic pregnancies, intestinal obstructions, acute pancreatitis and strangulated hernias. It can also be used in patients who may need ventilatory support. Tramadol can be used orally for patients who can take oral medication. Antiemetics will have to be prescribed alongside due to the side effects of nausea and vomiting. NSAIDS may not be the best choice for patients bleeding as it may aggravate bleeding and can also cause renal ischaemia. Local anaesthetics in the form of local infiltration and nerve blocks can be very useful because it gives complete analgesia and blunting of the neuro endocrine response. Local infiltrations are used for wound suturing, cannulations, needle decompression of chest and intercostal tube insertions. Lignocaine in adrenaline can be used in a dose of 7mg/kg.
Intrpleural and inter costal nerve blocks are also useful procedures. Longer acting bupivacaine can be used for such procedures in a concentration of 0.25%. Maximum dose is restricted to 2mg/kg. Bier's block is another common procedure that can be used in the emergency room.

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THE COLLEGE OF ANAESTHESIOLOGISTS OF SRI LANKA

CME LECTURE SERIES – 2010

Every third Saturday of the month

Time: 10.00 am – 12.00 noon

Venue: Dept of Surgery Lecture Hall, NHSL

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