INTRODUCTION

Pain:

Definition of pain:

Mountcastle in 1968, wrote simply "pain is that sensory experience evoked by stimuli that injure". The taxonomy committee of the International Association for the study of pain chaired by Merskey in 1979 defined pain as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage". They added crucial notes to this sentence:

Pain is always subjective. Each individual learns the application of the word through experiences related to injury in early life **(Wall ,1984).**

In attempting to understand the patient's complaint, a comprehension of factors that influence the perception as well as the cause of pain is essential. Learned behavior, ethnic, religious, and cultural factors, the context of the painful situation, social influences, and psychologic factors all contribute to the complexity of pain. **(Warfield and Stien 1991).**

Function of pain:

Pain in its acute form, especially when it is caused by disease, plays a biologic role; it warns the patient that something is wrong and prompts him to seek help. **(Dwaracanath ,1991).** Its aversive nature strongly motivates the patient to avoid noxious stimuli. Moreover, pain may help to promote healing by motivating the patient to avoid contact or motion of an injured area. **(Raja et al., 1988).**

However, if not treated adequately, pain persists beyond its useful purpose and results in profound behavioral disturbances, **(Dwaracanath ,1991),** and produce serious abnormal physiological and psychological reactions, which in turn can cause complications that prolong disability. Pain, when it outlasts the natural course of disease or injury, or when it accompanies a chronic disorder, loses its biologic importance, serves no useful function and does not permit the organism to escape harm. **(Sternbach ,1984).**

Types of pain acute or chronic:

There seems to be a quite significant difference between acute and chronic pain. Whereas acute pain may promote survival, chronic pain is usually destructive, physically, psychologically and socially. **(Sternbach ,1984).**

Acute pain:

Patients with acute pain are characterized by a well- defined temporal pattern of pain onset, usually associated with subjective and objective physical signs. These signs are commonly associated with hyperactivity of the autonomic nervous system. Acute pain is relatively easy to recognize and is more amenable to many of the therapeutic approaches available **(Foley ,1982).**

Chronic pain:

In contrast, chronic pain is the persistence of pain with a less well-defined temporal onset, in which the signs of autonomic nervous system hyperactivity are absent. With patients in chronic pain, the persistent pain has usually failed to respond to those modalities directed at the treatment of the cause of pain **(Foley ,1982).** In general, these patients respond poorly to the use of analgesic agents and have developed significant changes in personality, lifestyle and functional ability. **(Abram, 1989).**

Visceral versus somatic pain:

Somatic pain sensation is much more precise in its localization. It is concerned with our relationship to external factors. Visceral pain, on the other hand, is often poorly localized due to the relative paucity of nerve endings, the threshold of sensation is higher and the infrequency of the challenging stimuli from the internal environment. **(Mallani et al., 1984).** Visceral pain is described as dull aching boring, cramping or colicy squeezing, pulling and appears to come from deep inside the body and in most instances overlying the general area of the viscera involved, **(Haugen ,1968).** While superficial somatic pain has been classified into pricking pain, burning pain and aching pain. **(Alauuhta et al., 1990).**

Another difference between the two systems is that many of the stimuli, which activate somatic sensory nerves, do not elicit pain response when applied to viscera. If the abdominal wall is infiltrated with a local anaesthetic, the abdomen can be opened and the intestine can be handled, cut and even burned without eliciting any discomfort. Visceral pain receptors are present in the viscera, however, and although they are more

sparsely distributed than in somatic structures, certain types of stimuli cause severe pain, such as ischemia, chemical stimuli, and spasm and over distension of a hollow viscus. **(Guyton ,1991).**

Referred pain:

At times the sensation of pain arising form viscera is referred to an area of the body distant from the point where the stimulus originates. In addition to pain, hyperalgesia of the skin and muscle spasm may be noted in the area of referral. Figure 1- illustrates the most likely mechanism by which most pain is referred. In the figure branches of visceral pain fibers are shown to synapse in the spinal cord with some of the same second-order neurons that receive pain fibers form the skin. When the visceral pain fibers are stimulated, pain signals from the viscera are then conducted through, at least, some of the same neurons that conduct pain signals from the skin, and the person has feeling that the sensations actually originate in the skin itself. **(Guyton ,1991)**