INTRODUCTION

The thoracolumbar spine injuries present a special therapeutic challenge to the orthopaedic surgeons responsible for their care.

Inspite of massive architecture and rugged construction, the great majority of spine fractures occur in the lumbar and distal thoracic region of the spine and accounts for more than 50 per cent of all vertebral body fractures.
The thoracolumbar junction marks an abrupt transition between stiff and mobile segments, thoracic kyphosis and lumbar lordosis also with loss of rib cage and lastly changes of axis of motion .

The thoracolumbar spine injuries are associated with 40 per cent of all spinal cord injuries and 10 per cent of the thoracolumbar fractures are unstable. The neurologic deficits occur in 50 per cent of thoracolumbar injured patient are due to instability .

There are two primary areas of concern to the orthopaedic surgeons: first, the neurologic status of the patient, and second, the mechanical injury .

Patients without neurologic compromise should be protected and those with neurologic compromise should be given the optimum chance for recovery and rehabilitation . The recognition of the unstable injury patterns allows early operative intervention, preventing late deformity, neurologic loss and prolonged rehabilitation . Similarly, recognition of stable injury patterns that will heal well with conservative treatment can prevent unwarrant surgical risks and morbidity, (Dunn; 1990).

The aim of surgery is to provide anatomic alignment with stable fixation .
It is necessary to determine the primary vector of injury . The spine will remain unstable in the same direction as the primary injury vector .

We must select the surgical construct that will apply corrective forces in the opposite direction .
Each type of the thoracolumbar spinal fractures presents a unique set of biomechanical considerations . Because no one spinal instrumentation is wall suited for all fractures, wise selection of a treatment option depends on an understanding

of fracture biomechanics as well as the biomechanics of the various spinal fixation systems , (Ferguson; 1986).

The clinical effectiveness of any surgical technique whether anterior or posterior will depend on the degree to which it can directly oppose the forces of injury and stabilize the spine three-dimensionally, (Edwards and Levine; 1990).

The aim of this assay is to differentiate between the variable methods of internal fixation of the thoracolumbar injuries as regard indications , advantages , disadvantages and complications of each method.