INTRODUCTION AND AIM OF THE ESSAY

INTRODUCTION

The cervical spine is made up of the first seven vertebrae in the spine. The cervical region is much more mobile than either of the thoracic or lumbar regions (*Bogduck, 1988*). The vertebrae support the majority of the weight imposed on the spine. The body of each vertebra is attached to a bony ring that consists of several parts.

Between each vertebra in the cervical spine, except the first and the second, there are discs which act as shock absorbers and as joints. They are made up of a strong outer ring of fibers called the annulus fibrosus, and a soft center called the nucleus pulposus (*Furman and Puttlitz, 2001*).

The entire spinal column is joined together by ligaments that allow the spine to bend and twist carrying the weight of the human body with just the right balance of strength and flexibility. Special joints between each of the vertebral bodies, called facet joints, allow the individual bones of the spine to move and rotate with respect to each other. The facets connect the bony arches of each of the vertebral bodies. There are two facet joints between each pair of vertebrae one on each side. Many muscle groups, that move the trunk and the limbs, also attach to the spinal column and are important for maintaining posture and helping the spine to carry the loads created during normal activities (*Bogduck, 1988*).

The neural foramen is the opening where the nerve roots exit the spine. There are two neural foraminae located between each pair of vertebrae, one on each side. In the cervical region, the nerve root exits above the pedicle of its like-numbered vertebra (*Furman and Puttlitz, 2001*).

A number of distinctions between bulging disc, protruded disc, migrated disc, sequestrated disc … have been made based on pathologic or operative findings (*Gokasalan and Cooper, 1996*). Prolapse can compress the spinal

nerves causing radiculopathy, the spinal cord causing myelopathy or both causing radiculomyelopathy (*Furman and Puttlitz, 2001*).

The radiologic evaluation of patients with suspected cervical disc prolapse begins with plain radiographs, computed topography (CT), (*Ellenberg et al; 1994*). Magnetic resonance imaging (MRI) has become the method of choice for further radiographic evaluation (*Stalhaman, 1999*).

The appropriate management depends primarily on the patient clinical examination and the associated disability, in the presence of absolute indications for surgery; progressive weakness, progressive sensory deficit, clinical evidence of spinal cord compression...etc, surgery is indicated. Otherwise, initial treatment trial may include rest, neck collar, anti-inflammatory medications, epidural steroid injection and physical therapy (*Handerson, 1996*). The cervical disc may be approached anteriorly or posterolateraly (*Peltier, 1999*).

The anterior approach is technically easier, relatively bloodless, utilizes natural anatomical planes and safer from the levels of C3 through C7. It is indicated in central disc prolapse with or without posterolateral component, posterolateral disc prolapse and disc prolapse with associated significant spondylosis (*Gokasalan and Cooper,1996*).

Post-operative care has to be directed to check for evidences of significant haematoma, weakness in the distribution of the nerve root at the level of operation, long tract signs, swallowing difficulty or hoarseness as the anterior approach carries the possibility of some complications in the form of injury to pharynx, esophagus, trachea, recurrent laryngeal nerve, vertebral artery, carotid artery, sympathetic plexus, thoracic duct, spinal cord or nerve root, in addition to bone fusion problems (*Taylor et al; 1999*).