Introduction

The term "thoracic outlet syndrome" (TOS) refers to the clinical disturbance resulting from compromise of the neurovascular bundle (brachial plexus, subclvain artery, or vein) by bony or soft tissue anomalies during its course between the neck and axilla *(Maxey et al., 2003)*. Most patients present with a neurogenic TOS with symptoms of brachial plexus compression as pain, paresthesia and dysesthesia. Syndromes due to subclavian arterial or venous compromise are relatively uncommon and do not usually present a problem in diagnosis *(Wilbourn, 1988)*.

The diagnosis of neurogenic TOS is relatively straightforward in the patient with pain and sensory disturbance predominantly in the ulnar foream and hand, aggravated by use of the affected limb; associated with weakness and wasting of the small hand muscles particularly in the thenar eminence., a radiographic cervical rib; and neurophysiological studies confirming chronic postganglionic axonal loss, and excluding focal mononeuropathy *(Gilliatt et al., 1970)*.

Many patients with suspected neurogenic TOS, however, fail to exhibit such a clear cut clinical, neurophysiological and radiological picture. Indeed it is self evident that the full blown syndrome must go through a long stage of evolution when such features are only partially present and insufficient for definite diagnosis of TOS. Further, although soft tissue anomalies, including various fibrous bands and less commonly scalenus anterior and medius muscles anomalies may be responsible for TOS *(Bonney, 1965, Ross, 1976)* only the bony abnormalities (cervical rib, malunited clavicular fracture, abnormal first thoracic rib) are clearly demonstrated by preoperative radiography. Unfortunately, there is no single criterion upon which to base a diagnosis. Currently this depends on collating the symptoms, examination findings, and results of

electrophysiological and radiological studies. However, dynamic factors related to posture are of importance in TOS for even the findings at surgical exploration or brachial plexus imaging, when gravity no longer depresses the shoulder girdle , may not provide a diagnostic gold standard ***(Donaghy et al., 1999)***.

Conservative management is the initial treatment of choice , since patients with TOS may be cured with postural correction, stretching and strengthening exercises ***(Novack et al., 1995) and (Kenny et al., 1993).***

Surgery may be successful when TOS fails to improve with conservative treatment or when patients have symptoms too severe to tolerate conservative management ***(Oates and Daley 1996)***.

Selection of patients likely to benefit from surgery on one hand , and timing of surgery on the other hand, are however still debated. Numerous surgical procedures have been described for decompression ***(Oates and Daley 1996).*** Although first rib resection via Roos' trannsaxillary approach is the most frequently used ***(Roos, 1966)***, no clear advantage has been demonstrated for any technique ***(Sanders, 1996)***, and the choice of a procedure still largely depends on the surgeons' preference ***(Tosos, et al., 1998)***

The aim of this work is to throw some lights on the subject of TOS regarding anatomy, aetiology pathogenesis, presentation, diagnosis and different methods of treatment.