Abstract:
Thoracic outlet syndrome is a syndrome involving compression at the superior thoracic outlet involving compression of a neurovascular bundle passing between the anterior scalene and middle scalene. It can affect the brachial plexus, andor the subclavian artery or rarely the vein. Causes of TOSThe compression may be positional (caused by movement of clavicle and shoulder girdle on arm movement) or static (caused by abnormalities or enlargement or spasm of the various muscle surrounding the arteries, veins and brachial plexus), a first rib fixation and a cervical rib.

Keyword: Thoracic outlet syndrome, Cervical rib, Subclavian artery aneurysm.

CASE REPORT:
A 55 years old female presented with complaints of left neck pain and left neck swelling of six month duration. Past history – she had been diagnosed to have cervical rib for which scalenotomy had been done elsewhere a few years before. Clinical examination revealed a scar in the left supraclavicular area and a pulsatile mass in the left supraclavicular area. Allens test, Adson test, EAST(Elevated arms stress test) were positive.

She was subjected to the following investigations
X ray neck showed Cervical ribCT angiogram showed subclavian aneurysm with poststenotic dilatation. The following four pictures are the preoperative pictures.

Preoperative Picture of the patient
She was planned for cervical rib excision, aneurysmal excision and bypass grafting. Procedure under GA, using supraclavicular approach cervical rib was excised. Aneurysmal portion of that subclavian artery was excised. Bypass grafting was done between the subclavian artery and axillary artery using ringed PTFE graft.

**Picture 3: Supraclavicular area exposure**
Picture 7: Arterial bypass grafting - Proximal anastomosis in

Picture 6: After rib resection

Picture 8: Arterial bypass grafting - distal anastomosis

Picture 9: Closure of the wound - drain placed in situ

Picture 11: Post operative picture of the patient during discharge
Discussion:

Types of TOS: 1) Neurogenic TOS 2) Venous TOS 3) Arterial TOS

Clinical features:

Diagnosis
Clinical examination, blood tests, Chest x ray and Cervical spine x ray to rule out cervical rib. Vascular studies like Arteriogram, Venogram, CT/MRI angiogram of neck and arms.

Treatment
Neurogenic TOS is treated by physical therapy to increase range of shoulder movement and medication like aspirin, ibuprofen. Venous TOS is treated by thrombolytic therapy, anticoagulants – warfarin, heparin, fondaparinux and surgery for cervical rib excision. Arterial TOS is treated by thrombolytic therapy, anti coagulants and after establishing vascularity, surgery for removing cervical rib, aneurysm excision and repair of the artery. Various surgical approaches includes: 1. Trans axillary- less scarring but difficult to access subclavian artery 2. Supraclavicular – Good accessibility of subclavian artery 3. Video assisted thoracoscopy.