Surgical Treatment of the Thoracic Outlet Syndrome

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Objective:

Review a series of 36 TOS cases operated at our institution

Methods:

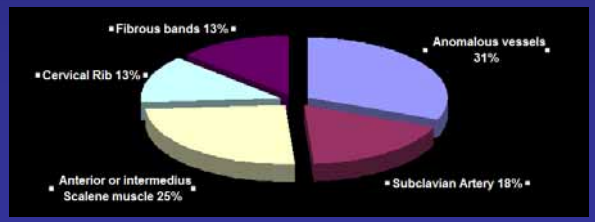
- Selected 32 patients (36 plexuses) operated for TOS
- Mean follow up was 18,4 months (minimum of 6 months)
- 29 females, 3 males, mean age 36,5 y
- Classified according to Wilbourn
- Supraclavicular approach used on all cases

Anomalous artery compressing the uper trunk of the brachial plexus (arrow).

Erosive lesion found below the anomalous artery at the upper trunk (arrow).

Middle trunk of the brachial plexus being compressed by an anomalous artery (arrow).

Compressing anatomic alterations found:



(On nine cases presenting cervical ribs, this alteration was not found to be the cause of compression).

Complications:

- Found on 27,74% of cases (10 patients)
- Transient hemidiaphragm paralysis on 3 cases
- Supraclavicular hematoma on 3 cases
- Complex Regional Pain Syndrome on 1 case
- Adhesive capsulitis on 1 case
- Transient Serratus Anterior paralysis on 1 case
- Hipertrophic scar on 1 case

Results:

- Excelent or good on 75% of total cases
  - Excelent 44,45%
  - Good 30,55%
  - Fair 16,65 %
  - Poor 8,35%
- Excelent or good on 71,43% of “disputed” cases
- Excelent or good on 56,35% of cases previously diagnosed as Repetitive Strain Injury
- Excelent on 87,50% of “true” neurogenic cases

Conclusions:

✓ TOS incidence is higher on middle-aged women, on the right side

✓ Explains atipical pain on the upper limbs

✓ Hard to diagnose on “disputed” type

✓ Clinical examination must be meticulous and repeated over several times

✓ Surgery is indicated on assured cases after failure of conservative treatment

✓ The supraclavicular approach is safer and allows wide exposure

✓ Double-Crush Syndrome must be kept in mind