Management of The Adult Brachial Plexus Injured Patient

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Introduction

- Multi-disciplinary team.
- Clinical Priorities In Pre-Operative Management.
- Post Operative Rehabilitation.
Multidisciplinary Team

- Specialist Pain Team
- Specialist Psychology/Psychiatry Services
- Specialist Radiographers
- Specialist Electromyography
- Specialist Therapy Services (esp hand therapy)
- Specialist Orthotics Services
- Specialist Surgical Team
Clinical Priorities

- Early assessment and diagnosis
- Early surgical intervention as required
- Strict but clear post operative guidelines
- MDT clinical assessment and holistic rehabilitation
Early Pre-operative Management

Clear subjective history and Objective findings

ASIA Charting and scoring mechanism used

- Kendal muscle charting MRC (0-5)
- Tinnel’s sign (supra/infraclavicular)
- Horner syndrome

CT Myelogram and/or T2 weighted MRI to look for

EMG/nerve conduction studies (very difficult in early
Surgery

- Purposes of surgery
  - Exploration +/- decompression (neurolysis)
  - Grafting with intra-plexus donors
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  - Re-implantation of avulsed nerve roots
Post op Management

- With Neurolysis/decompression early ROM. (remember pec major repair!)

- Any Grafting (immobilised for six weeks)

- Ensure Hand and Wrist ROM is maintained (elbow also if only Suprascapular nerve).
Rehabilitation Principles

- Pain Management
- Restore and maintain PROM and encourage involvement of limb
- Hand Splints/orthotic devices
- Return to work/recreational activity
Pain management

- Post avulsion pain can be intractable continuous, burning, compressive.

- Medical intervention with narcotics, tricyclic antidepressants, antipsychotics, anticonvulsants, and sympathetic blocks.

- Occasional surgical options include dorsal root entry coagulation procedures.
Rehabilitation

- Active and Passive stretches
- Manual therapy
- Hydrotherapy
- Postural and balance exercises
- Role of Electrotherapy
Pyscho/social Elements

- Huge Poly-trauma and long recovery phase.
- Significant Pain elements
- Gross deformity of the upper limb
- Limited prognosis with partial restoration of function.
Pyscho/social Support

- Social Worker and case managers (litigation elements)
- Significant element of depression
- Loss of earnings, profession, family roles
Summary

- Early assessment and intervention
- Comprehensive MDT working
- Long-term follow-up and management