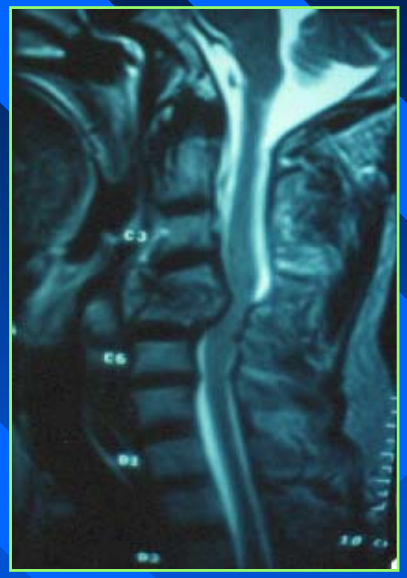
AGGRESSIVE SURGICAL APPROACH TO SPINAL TUBERCULOSIS (CERVICAL SPINE)



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TUBERCULOSIS OF SPINE IS SHROUDED WITH

- Varying presentations
- Varying problems
- Varying outcome

EPIDEMIOLOGY

- Unless there is good epidemiological studies it is not possible to rationalise the observations

THE PROBLEM

- Good clinical observations were recorded in the seventh decade
- Spinal surgery had still not developed

THE PROBLEM

- 8th Decade
- Good Chemotherapy
- Some rational surgical help available
- Observation: Surgery helped early neurological recovery
- Less incidence of deformity

THE PROBLEM

- 9th Decade
- Better concepts of appreciation of neurological deficit
- Firm belief: Aggressive decompression and stabilisation
- Better outcome in neurological deficit

THE ACHIEVEMENTS

- Last decade of last century
- Spinal surgery at its peak
- Technology-zoomed ahead
- Implants flourished
- Superior chemotherapy
- Decrease in the incidence of spinal tuberculosis


DECADE OF THE SPINE 2001-2010

THE SURGEON

- The incidence of regional proportions varies depending on the interest of surgeon in a particular region of the spine.

INCIDENCE

- There is definite decrease in the incidence of spinal tuberculosis in general and cervical in particular since 1965

COMMON SITE

- C1/C2 region : More common in young children.
- Cervical dorsal region : More common in males.
- Mid cervical : More common in young females.

PRESENTATION

- C1/C2: Involves one lat. mass
  Pain and torticolis common,
  Rarely neurological deficit.
- Mid cervical : Young females,
  Pain; difficulty in swallowing ;
  radiculopathy; quadruparesis.
- Cervico-dorsal region : More common in males.
  Pain predominant; dysfunction of small muscles of one hand; paraplegia

PROBLEMATIC COMPLICATIONS

- PARAPLEGIA
- SPINAL DEFORMITY

  - **M.S. Moon;Clin ortho1996**

MANAGEMENT

- WITH NEUROLOGICAL DEFICIT
- WITHOUT NEUROLOGICAL DEFICIT

TWO APPROACHES

A. Conservative medical and rest

B. Aggressive surgical

RESULTS

Wide variations.

OBSERVATION ON MANAGEMENT

The fact

- CONSERVATIVE : 6 months for recovery children 4 months.
- SURGICAL : Less than 2 months early mobilisation

PARAPLEGIA

- Due to active disease : easy to treat
- Due to deformity : improvement not encouraging

FACTORS AFFECTING RECOVERY

- Health;age; site of lesion;
- No. of vertebrae involved;
- Severity of defermity;
- Duration of paraplegia;
- Time of initiation of treatment;
- Type of treatment;
- Drug sensitivity.

INCIDENCE OF PARAPLEGIA OVERALL 20%

- Has not changed over the years
- Higher incidence in children upto 74%

- In cervical spine the incidence of paraplegia has been 42.5% in 40 cases

  - **JCY LEONG J.Bone Jt Surg- 1984.**

WHEN TO SUSPECT NEUROLOGICAL DEFICIT

- When both ant & post columns are involved in infection as judged by CT and MRI: High incidence of neurological deficit.

Spinal stabilisation mandatory.

BASIC PRINCIPLES OF MANAGEMENT

- Early diagnosis
- Expeditious medical treatment
- Aggressive surgical approach
- Prevent deformity
- Expect good outcome

OVERALL RECOVERY IN NEUROLOGICAL DEFICIT

- Overall recovery with acute disease by aggressive surgery : 94%
- Overall recovery with established deformity : 20%
- Conservative treatment : 77%

PREVENTION OF NEUROLOGICAL DEFICIT

- Early aggressive surgical stabilisation of spine

RECOVERY IN EARLY PARAPLEGIA

- Recovery rate in conservatively treated early paraplegia:…… 38%

- **TULI S.M:. J.Bone Jt. Surg. 1975**

GENERAL OBSERVATION

Patients with neurological deficit show spontaneous improvement

- Without chemotherapy
- With chemotherapy
- Without surgery

But prognosis is improved by early decompression; reconstruction and stabilisation

CLINICAL DATA

Period 5 years 1996-2000

N= 31 cases

		M	F
C1/C2	2	0	2
			(Both are below 12)
C2/D2	14	3	11
Dorsal	8	6	2
Lumbar	7	5	2

OBSERVATIONS ON CLINICAL DATA

Affliction of

- Cervical spine : Most common in females
- Dorsal spine : Most common in males
- Lumbar Spine : Most common in males

OBSERVATION ON CLINICAL DDATA

NEUROLOGICAL DEFICIT

	No deficit	Root signs	Paraparesis
C1/C2	1	1	0
Cervical	3	5	6
Dorsal	4	0	4
Lumbar	1	6	0

MID-CERVICAL

TRANSCLAVICULAR

DYNAMIC CAGE

SYNTHES PLATE WITH SPACER

SYNTHES PLATE WITH SAPCER

THANK YOU