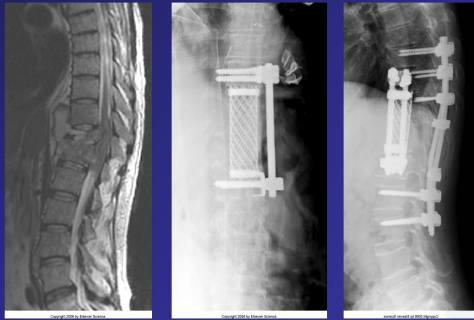


Surgical Management of Discitis and Vertebral Osteomyelitis



Mr M J H McCarthy and Mr D Chan

The Presentation

- Acute fever and pain
- More commonly:
 - Vague symptoms, chronic illness, low grade fever and back pain
 - 50% delayed diagnosis > 3/12
- Back pain >90%
 - Cervical 15% Thoracic 35% Lumbar 50%
- Fever 50%
- Neurology 15%

The Infection

- Spread:
 - Haematogenous
 - Venous vs Arteriolar theories
 - Contiguous
 - Direct Implantation
- Staph aureus >50% cases
- Gram $\ominus$
 - E.coli, Pseudomonas, Proteus
 - GU infections / procedures
- Disc Involvement:
 - Pyogenic nearly always
 - Granulomatous do not typically involve the disc
- TB

The Patient

- Adolescents / Elderly
- Immigrants
- IVDA
- Diabetics
- Renal Failure
- Spinal Surgery
- Rheumatoid
- GU / Cardiac Instrumentation
- Chronic Steroids / Immunosuppression



The Diagnosis

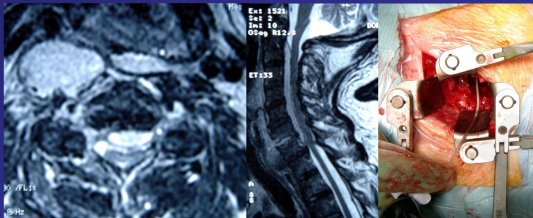
- Lab tests
 - Blood cultures yield correct organism 6-24%
- Imaging
 - XR changes 4/52, standing XR - deformity...
 - MRI – Imaging of choice
 - CT – bony destruction, biopsy
- Biopsy
 - Stop abs
 - Identifies organism 68-82%
 - 2 negative closed biopsies - ? proceed to open biopsy
 - All samples sent for micro and histology

Treatment

- Rest – brace
- Cultures
- Massive and prolonged antibiotics
 - Talk to the bug doctors
- Watch for bone stock loss
 - Don't wait for the deformity to get worse
 - Get erect XRs during course of treatment

Epidural Abscess

- Thoracic spine commonest
- Pain and fever
- Significant neurological deficits / paralysis can develop - reversible if op < 36 hours
- Death rate 10%



Children – The Little People

- Back pain
- Refusal to weight bear
- Flexed spine
- Non specific abdominal pain
- <50% have fever
- Blood cultures usually negative

The Red God / White Plague

- Risk factors
 - Asia, S America, Russia
 - Confinement – homeless shelters, prisons
 - Elderly, alcoholics, AIDS, contacts
- Variable presentation
 - Cutaneous sinuses
 - Neurological deficit up to 40%
 - Kyphotic deformities
- Peridiscal, central and anterior subtypes

Goals of Treatment

- Early diagnosis
- Eradicate infection / treat sepsis
- Preserve spinal stability
- Prevent / reverse neurological deficits
- Pain relief
- Prevent deformity
- **Good Prognostic Indicators:**
 - <60yrs, Immunocompetent, Staph aureus, good response to abs

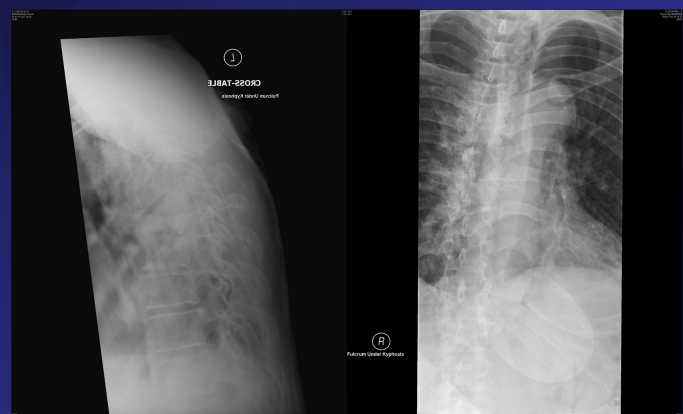
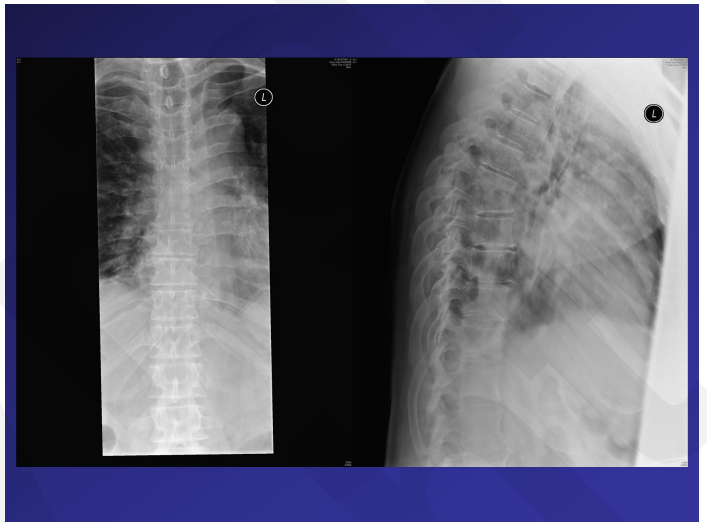
Operative Intervention

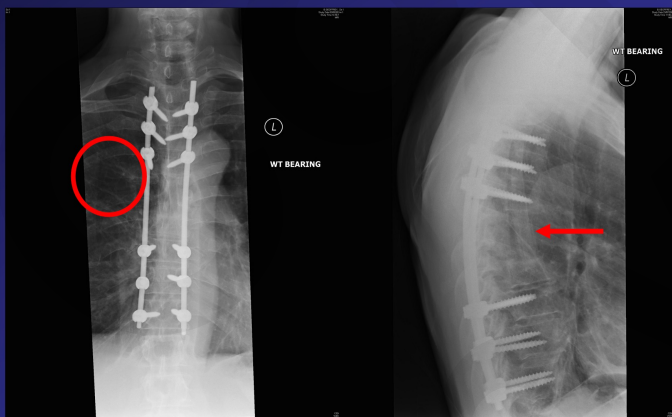
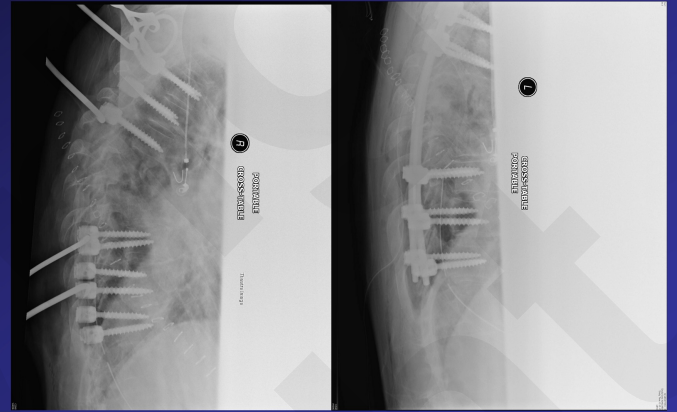
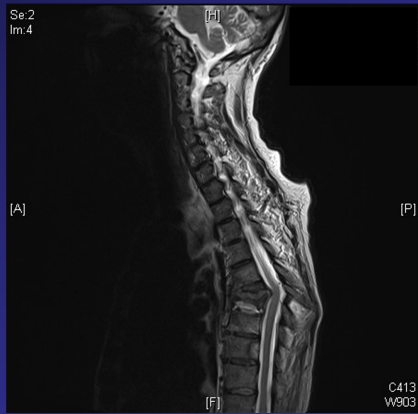
- Open biopsy required for diagnosis
- Failure medical management
- Drainage of abscess
- Decompression of spinal cord compression with neurology
- Correction of progressive or unacceptable spinal deformity
- Correction of progressive or unacceptable spinal instability

Goals of Surgery - Enjoy

- Complete debridement of all non-viable and infected tissue
- Decompress neural elements
- Long term stability through fusion
- How?
 - generally anterior then staged or simultaneous posterior surgery

Examples





The case from hell!

