Spinal deformity – Possibilities of surgical treatment in the adult patient: Asian Practice

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Vertebral Column Decancellation (VCD) for Management of Sharp Angular Spinal Deformity

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History of Osteotomy

Open

Close

Close-Open

VCR
**Limitations of VCR**

- Greater risk neurologic deficit (Sagittal translation or buckling)
- More unstable
- More manipulation performed in cord territory
- More blood loss
- Subsidence & misplacement of metal mesh
Must we resect the deformed vertebrae totally like the management of spinal tumor???
Vertebral Column Decancellation (VCD) ---New Concept

Vertebral body decancellation

Removal of disc
Vertebral Column Decancellation (VCD) --- New Concept

After decancellation and disc resection

Realignment
Vertebral Column Decancellation (VCD) --- New Options

- Multilevel vertebral body decancellation
- Removing residual disc
- Extensive posterior decompression
- Gentle manipulation
- Osteoclasis anterior apex
- Hinge retroposition
- Anterior open, elongation
- Bony cage - metal mesh
Case 1: Female, 26 Y, Pott’s Deformity 12 Y
Case 1
Case 1
Case 1

Preoperative

Postoperative

Hinge retroposition
Anterior open
Elongation
Bony cage
Case 1

2 years follow-up
Case 1

2 years follow-up
Case 2
Male, 18Y, TB infection at 4Y, Pott’s deformity

138°
Case 2

Preoperative

Postoperative
Case 2

Final follow-up
Case 2: Vertebral Column Decancellation (VCD) was performed at T11, T12, L1, L2.
Case 3: Male, 16 Y, infected with spinal tuberculosis at 1 Y, low back pain, cosmetic problem
Case 3

87°
Case 3
Case 3

3.5 years follow-up
Case 3

3.5 years follow-up

Case 4: Male, 26Y, Congenital kyphoscoliosis
Case 4
Case 4
Case 4

Preoperative vs Postoperative
Case 4

2 years follow-up
In conclusion

- Close-open osteotomy
- Less risk neurologic deficit (less Sagittal translation)
- Bone-to-bone
- “Bony cage”
- More stable
- Less vascular complication (from in to out)
- Less blood loss
Thank you