

Surgical Management Of Osteoporotic Spine And Related Disorders

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The number of patients with osteopenia or osteoporosis who need spinal surgery has been increasing in line with our aging society. These patients frequently accompanies with spinal instability and/or deformity caused by severe degenerative disc condition, spondylolisthesis, osteoporotic vertebral collapse and so on. In particular, elderly patients with osteoporosis highly suffered from vertebral fractures even if minor trauma or non-traumatic episode. Patients with an osteoporotic vertebral fracture can commonly show a good clinical course after conservative treatment in the form of activity modification, analgesics, and brace therapy. However, up to 30-40% of patients with acute fracture develop unfavorable outcome caused by prolonged low back pain. For these patients, percutaneous vertebroplasty and kyphoplasty have emerged as minimally invasive treatment and resulted in a major paradigm shift with significant pain relief and improvement of health related QOL. On the other hand, more aggressive surgical intervention using spinal instrumentation should be indicated if patients develop delayed neurological deterioration, apparent spinal instability and progressive spinal deformity. Although there is still controversy about the appropriate surgical option because these high aged patients often have several comorbidities in addition to fragile spine. Type and length of spinal fixation were generally decided according to neurological status, severity of spinal canal compromise, grade of spinal instability and deformity concomitant with patients' general condition. Further complicated situation such as steroid using, ankylosing spine, osteoarthritis and destructive spondyloarthropathy are also considered as influential factors of surgical strategy. Surgical indication and options in patients with osteoporotic vertebral fracture or fragile spine were presented with surgical tips and pitfalls in this presentation.