

Surgical treatment for lumbar degenerative de novo scoliosis with spinal stenosis

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Background

With an aging population, the incidence of degenerative scoliosis increased year by year, and many patients with lumbar spinal stenosis. People continuously improve the quality requirement of life, more and more patients chose surgery treatment in the case of ineffective conservative treatment.



Objectives

- To investigate clinical effects of surgical treatment for lumbar degenerative de novo scoliosis with spinal stenosis.

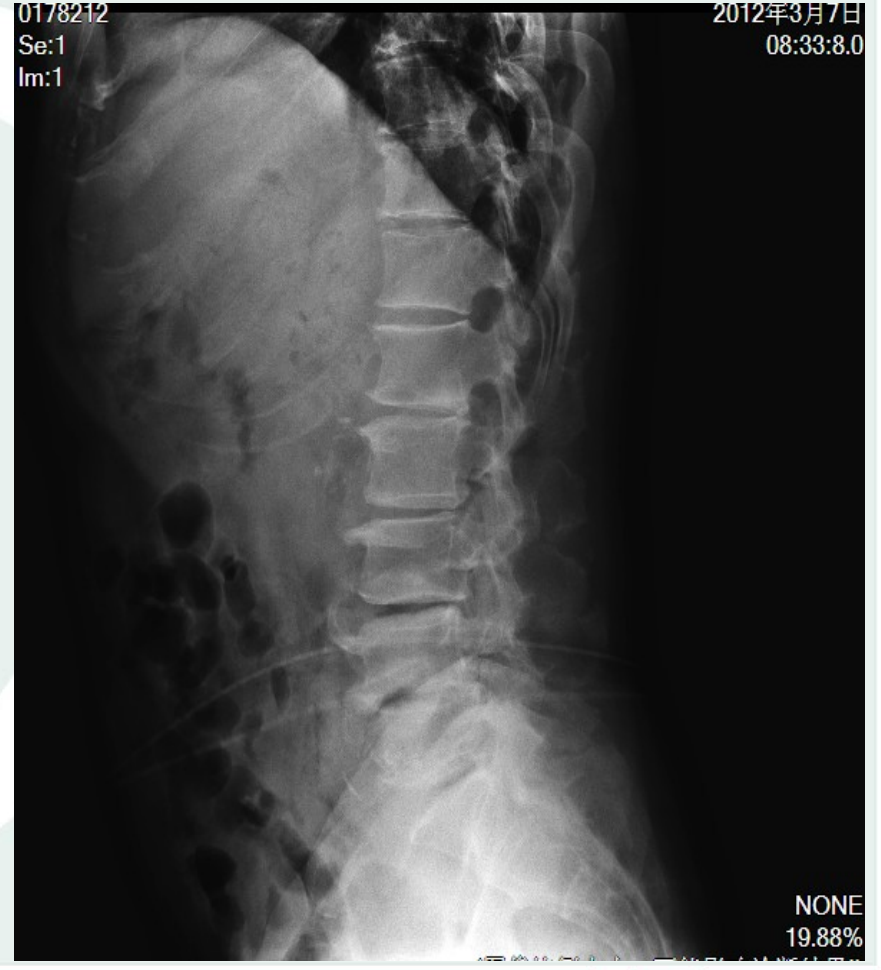


Patients & Methods

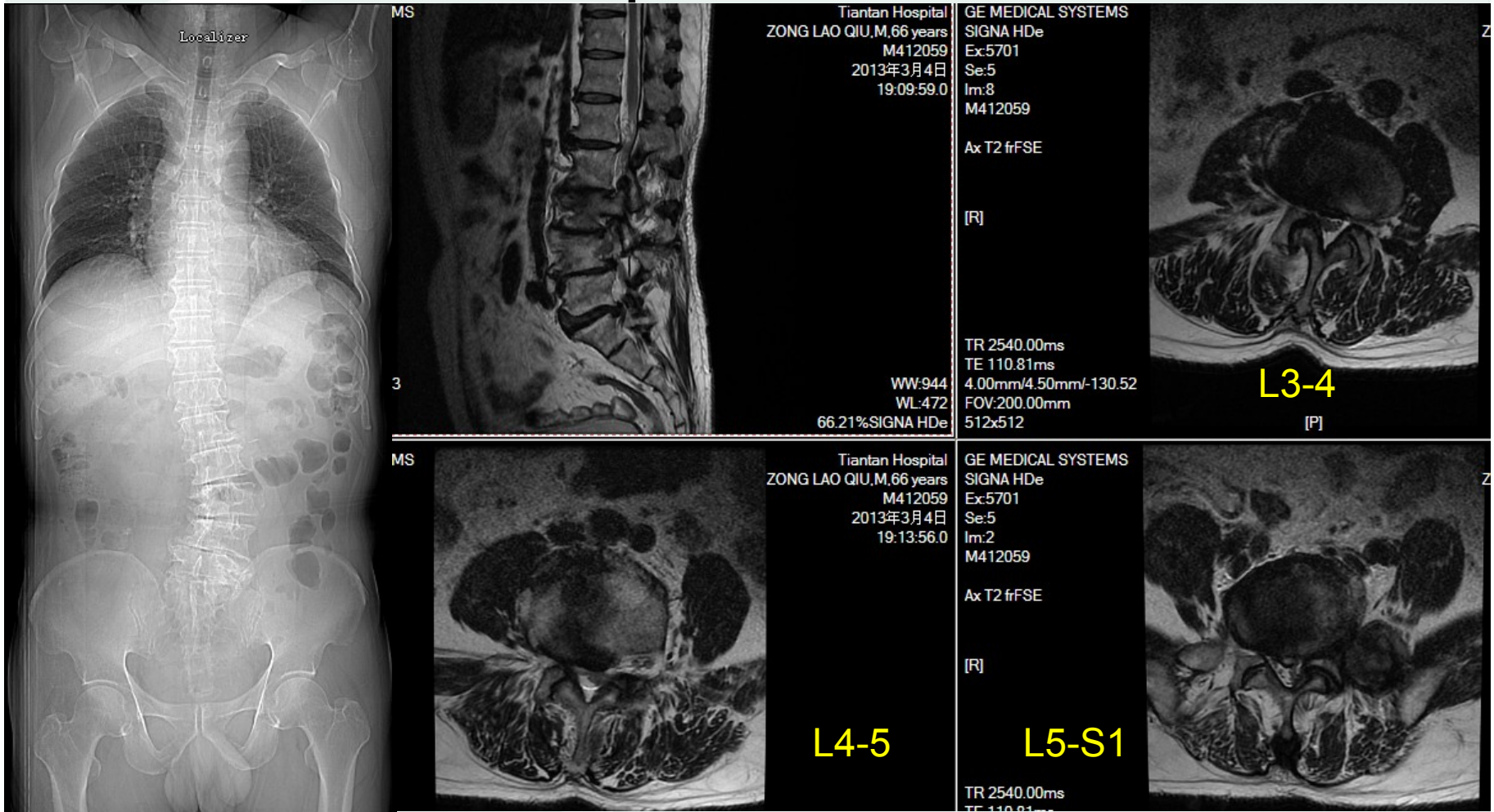
- Retrospective reviewed 27 patients of degenerative scoliosis with spinal stenosis were treated by operation. Female 20 cases, male 7 cases; average age 61.5(52~73)years.
- The involved segments were determined by clinical manifestations, radiographic data and findings intra-operation.
- All the patients were followed up with an average of 2.3 years.
- Measured Cobb's angle, lumbar lordosis angle, distance between C7PL and CSVL , JOA score and the SF-36 questionnaire to evaluate the effect of surgery.



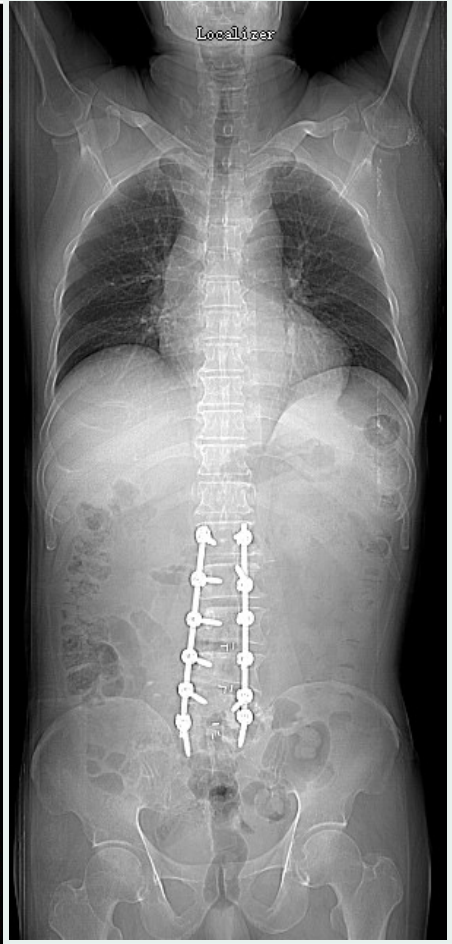
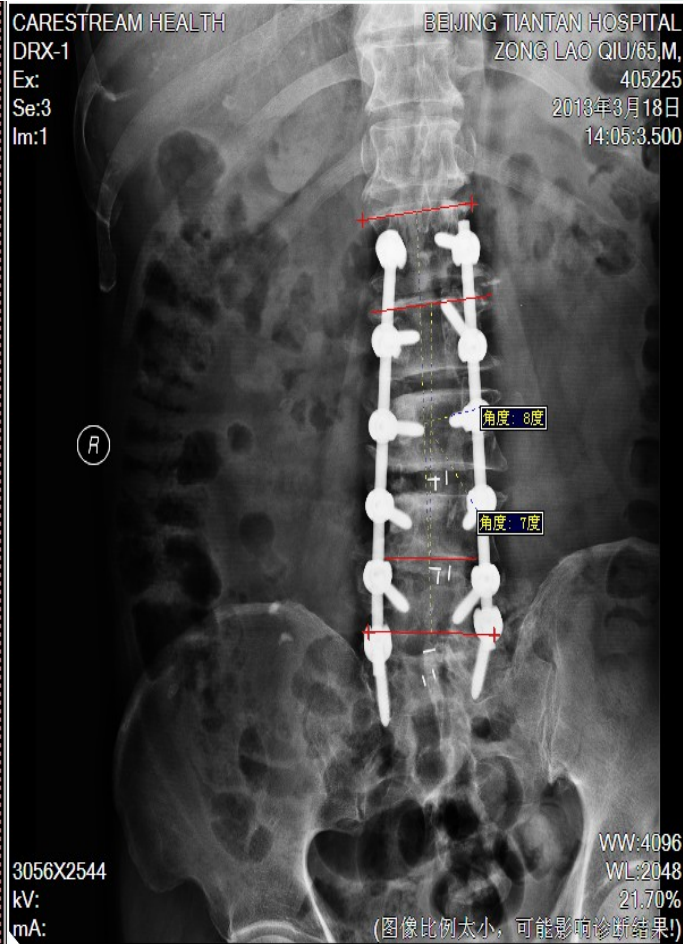
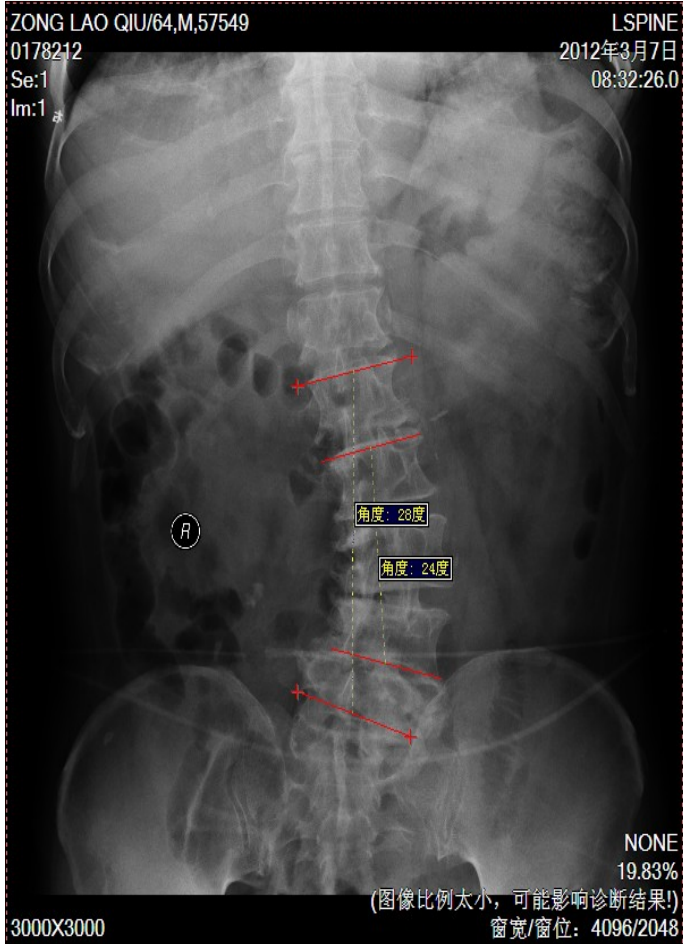
Case 1: Pre-operation of L3-S1PLIF



Case 1: Pre-operation of L3-S1 PLIF



Case 1: Post-operation of L3-S1 PLIF

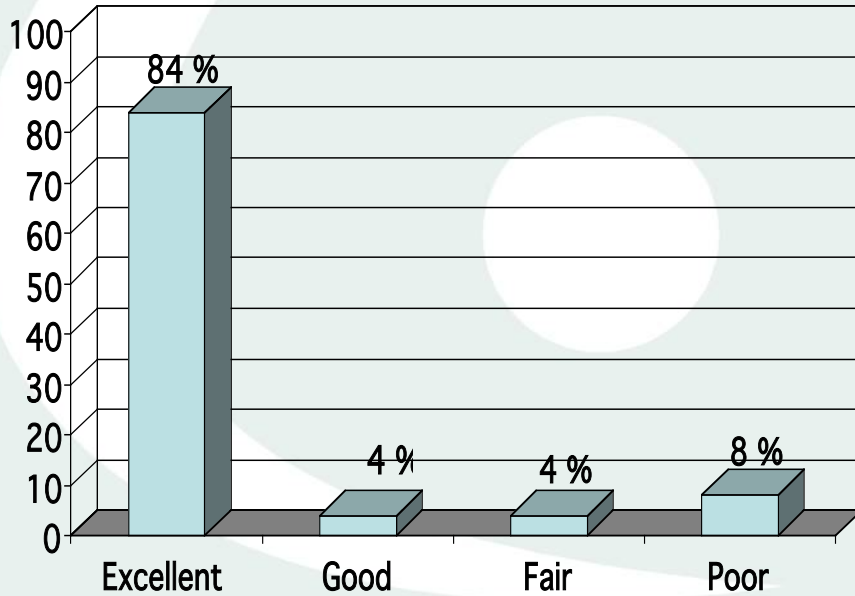


Results

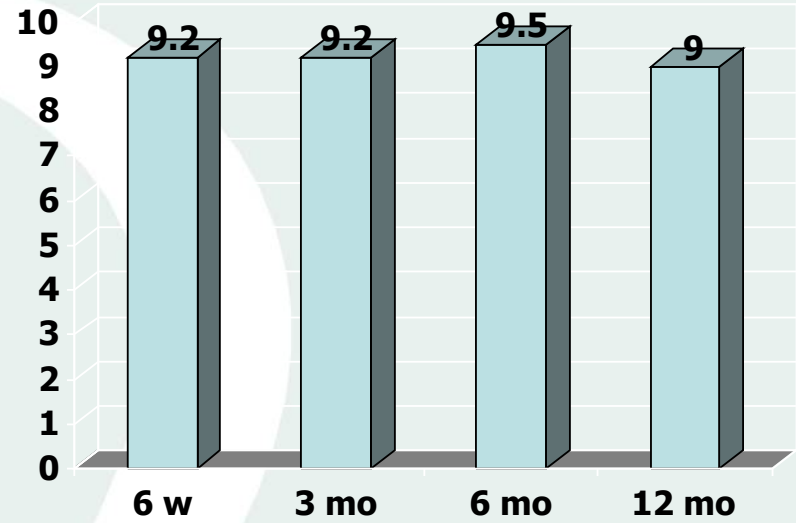
- Cobb's angle: from preoperative (22.1 ± 10.5)° to postoperative (8.3 ± 4.8)°, there was significant difference.
- lumbar lordosis angle: from preoperative (21.2 ± 10.3)° to postoperative (31.5 ± 12.3)°, $P < 0.05$
- distance between C7PL and CSVL : from preoperative (6.9 ± 5.3) cm to postoperative (1.6 ± 1.2) cm, there was significant difference.
- JOA score: from preoperative (10.8 ± 1.4) to postoperative (23.5 ± 2.3), there was significant difference.
- All domains of SF-36 score were significantly improved postoperatively ($P < 0.05$)



Results



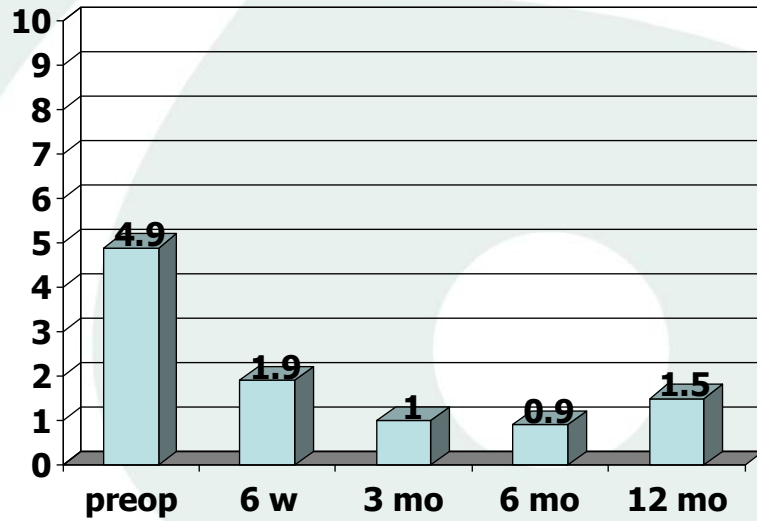
NDI improvement $P < 0.05$



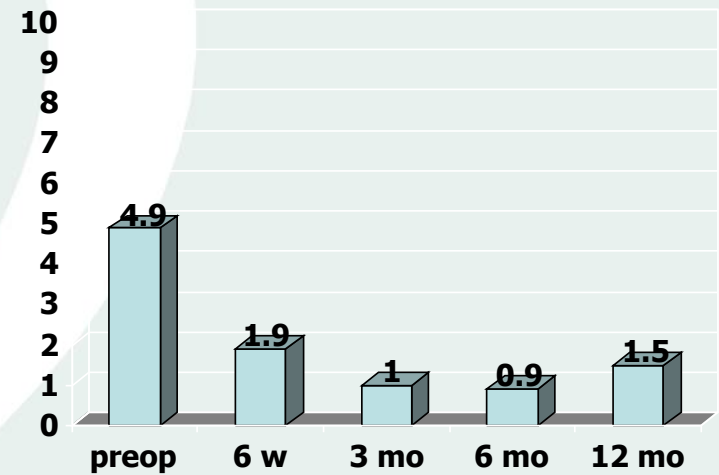
Patient satisfaction $P > 0.05$



Results



Neck VAS $P < 0.05$



Arm VAS $P < 0.05$



Conclusion

- Sufficient decompression is the primary purpose of surgery, also is the main means of solving patients' symptoms.
- Appropriate correction can effectively reduce the symptoms of patients with lower back pain.
- Surgical treatment with limited decompression, fixation and fusion is effective method for degenerative scoliosis with spinal stenosis, individualized surgery design should be determined by clinical symptoms, signs and imaging features.



Disclosure

- none of the authors has any potential conflict of interest

