

Abstract #1103.docx

MEDIUM AND LONG TERM SURGICAL OUTCOMES OF THORACIC SPONDYLOTIC MYELOPATHY CAUSED BY OSSIFICATION OF SPINAL LIGAMENTS. – MORE THAN 5 YEARS FOLLOW-UP -

Ossification of thoracic spinal ligaments is the great cause of myelopathy. The surgical management is still challenging issue. There has been only a few reports concerning about the long term outcome.

Purpose

- 1) To review the long term surgical outcomes of thoracic OPLL and OLF
- 2) To identify risk factors related to unfavorable outcomes

Materials and Methods

71 (OLF:37, OPLL:5, OLF+OPLL:29) patients were enrolled in this study. The follow-up period was 8.5 (5.0-15.9) years.

Imaging analysis focused on sagittal alignment and disease progression. Clinical results were assessed by the JOA score (11 points) and recovery rate. We also investigated secondary surgery.

Results

We performed posterior decompression in all cases. We also added 7 OPLL extirpations and 12 posterior instrumented fusions in 34 OPLL patients. The mean JOA score was 6.2 points preoperatively and 7.8 points at final (recovery rate 33.3 %).

In 37 OYL cases, the total thoracic kyphosis changed from 29.9 to 32.0 degrees at final. CT revealed OYL progression in 19 cases.

In 34 OPLL, the total kyphosis increased from 27.9 to 34.5 degrees. Local kyphosis was prominent in 10 cases. 3/10 cases needed revision surgeries. Posterior fusion was effective to prevent further kyphosis. The local kyphosis was from 23.2 to 24.9 degrees with fusion and from 9.8 to 14.8 degrees without.

The revision surgeries were required in 5 cases (one OYL and 4 OPLL). The reasons were diagnosis difficulty, progressive ossification and kyphotic change.

Discussion

We demonstrated three risk factors; (1) Difficulty in diagnosis, (2) Progression of ossification, (3) Kyphotic change. Two revision cases needed additional levels surgery to improve residual symptoms after the first operation. In tandem lesions it was tough to detect the responsible level. Furthermore disease progression was observed in 19/37 OYL and 15/34 OPLL cases.

Late neurological deterioration occurred in 3 OPLL cases. Though the progression of OPLL was detected, the kyphotic change (24 degrees) was a dominant factor.

Conclusion

The aggressive surgical strategy is favorable for thoracic ligament ossification. However we should pursue postoperative disease course and alignment. Posterior stabilization is desirable to keep alignment and maintain surgical effect during long follow-up.