Ponte osteotomy during dekyphosis for indirect posterior decompression with ossification of posterior longitudinal ligament of the thoracic spine

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Thoracic OPLL

Fusion surgery with instrument

Indirect spinal cord decompression, wide laminoplasty decompression and dekyphosis with instrumentation via a posterior approach
To investigate the outcomes after indirect posterior decompression and dekyphosis using multilevel Ponte osteotomies for ossification of posterior longitudinal ligament of the thoracic spine.
Materials

2010〜2012 T-OPLL

10例

Male: 5, female: 5
Ave. 47 yo (18–63)
Follow-up: Ave. 1y 6mo
BMI 34
Methods

- Pre- and postoperative Cobb angles of thoracic fusion levels
- Intraoperative ultrasonography
- Clinical results
Levels of Ponte Osteotomy

Both rostrally and caudally to the OPLL level

Just the caudal side or the rostral side
Intraoperative ultrasonography

 Decompression

 Dekyphosis

 浮上＋ 7/10 (70%)

 12/20 (60%)

 〜2006

 浮上— 3/10 (30%)

 8/20 (40%)

 〜2006
Thoracic kyphosis of fusion levels

Pre | Final
---|---
35° | 21°
14° |

JOA score

Pre | Final
---|---
3.5 | 7.5
We have corrected the kyphosis seen with thoracic OPLL using only the cantilever technique. However, this technique puts a significant load on the pedicle screws.
We incorporated the Ponte procedure to correct the kyphosis without causing significant screw loads. As a result, correction angle on radiograph with this procedure averaged 14°.
Conclusion

‘The Ponte procedure for indirect spinal cord decompression’ is a novel concept used for the first time with thoracic OPLL in our study, and we consider it a useful method to achieve more effectively dekyphosis and indirect spinal cord decompression if there is not the spinal cord free from OPLL on intraoperative ultrasonography after only laminectomies.

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