

Introduction

The aim of this study is to present this author's personal experience with transarticular facet screw fixation of the subaxial cervical spine for posterior instrumented stabilization.

Methods

Patients with degenerative cervical myelopathy due to cervical spondylosis and/ or OPLL with obliteration of cervical lordosis, reducible kyphosis and/ or subluxation were included in the study. Preoperatively and postoperatively, patients were evaluated using Nurick's grading, modified JOA score, plain radiographs, CT & MRI of cervical spine. Posterior decompression was done along with transfacet screw fixation at the affected levels. Complications were recorded. Follow up ranged from 2 months to 2 years.

Results

Period of study: 2012- 2015.
Number of patients treated - 12. All patients underwent transfacet screw fixation at the affected levels along with posterior decompression in the form of either laminectomy (10) or laminoplasty (2). Initially, Takayasu as well as DalCanto's techniques were used. However, this author's modified approach was used for the later 8 cases. Takayasu and Dalcanto's techniques were associated with higher incidence of fracture of the facets. This author's technique was associated with least incidence of facet fractures and the screw length was longer by 2mms. All the three techniques were able to achieve purchase of four cortices. There were no vascular or nerve root injuries or screw breakages during the follow up. Overall, the cost of transfacet screw fixation was 75% less than the cost of conventional lateral mass screw fixation. The limitations include difficulty in performing this technique in patients with short neck and prominent occiput. The advantages include cost reduction, the ability to combine posterior instrumentation with laminoplasty and lower implant profile.

Conclusions

Transfacet screw fixation is a biomechanically stronger, cost-effective and simpler way of posterior instrumentation of the subaxial cervical spine. This technique should be in the armamentarium of every spine surgeon.

Learning Objectives

This presentation will provide : 1. a new technique for posterior instrumentation of the subaxial cervical spine, 2. the technical nuances will be described,3. the advantages over conventional lateral mass screws will be discussed and, 4. limitations and pitfalls will also be discussed

References

- 1.Takayasu M, Hara M, Yamauchi K, Yoshida M, Yoshida J (2003)Transarticular screw fixation in the middle and lower cervical spine.J Neurosurg Spine 99:132-136
- 2.Muthukumar N: Transfacet screw fixation of the subaxial cervical spine : How I do it? Acta Neurochirurgica 155:1235-1239;2013.

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