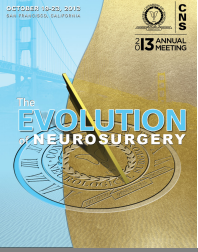


Single-stage Combined Posterior-Anterior Decompression and Instrumented Fusion for Management of Cervical Pathologies.

Ihab Zidan MD, PhD; Khaled Abdeen



Introduction

Surgical treatment of cervical spinal pathologies can be challenging operations. Surgical treatment can be divided into anterior, posterior, or combined procedures. Combined anterior and posterior procedures may be required in order to address a suitable treatment to the nature of cervical pathology. The aim of the study was to evaluate the applicability and safety of single-stage combined posterior-anterior decompression and instrumented fusion for management of cervical pathologies.

Methods

This prospective study was carried out on consecutive 18 patients who had been operated with single-stage combined posterior-anterior decompression and instrumented fusion. The indications of surgery included; traumatic fractures in 8 cases, cervical spondylitis in 7 cases and cervical tumors in three cases. Posterior stage was performed first together with lateral mass fixation followed by anterior stage and anterior cervical plating. A hard cervical collar was used postoperatively in all patients. All patients were followed up for 11 months on average. Fusion was assessed by plain X-ray films and CT scan, and the neurological outcome by ASIA impairment scale.

Results

All patients were safely operated with circumferential instrumented fusion. There were no surgery-related complications. Postoperative complications were reported in five patients. One patient showed transient neurological deterioration, two cases had wound infection, one patient with CSF leak and one patient with deep vein thrombosis. The mean operation time was 220 min (range 200–280 min) and the mean volume of blood loss was 485 ml (range 190–1100 ml). Regarding the ASIA impairment scale, eleven patients had shown improvement, while seven patients remained stationary at the same grade. Satisfying fusion and reduction was obtained in 15 patients (83%). There were no cases of graft extrusion, or plate or screw loosening or fracture

Conclusions

The single-stage combined posterior-anterior decompression and instrumented cervical fusion represents a viable option in the treatment of a group of patients with different cervical pathologies. The technique provides immediate rigid stabilization of the cervical spine, as it treats the anterior and posterior pathology simultaneously and corrects deformity.

Learning Objectives

by the conclusion of this session, participants will be able to: 1) discuss the indications of combined cervical instrumented fusion, 2) Describe the technique of combined anterior and posterior cervical surgery.

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