

Surgical strategies in managing cervical spinal canal stenosis

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Abstract

Introduction: ACDF& ACCF are the surgical means for managing degenerative cervical disc disease&/or stenosis, acute cervical disc herniation& fracture-dislocation of cervical spine. Surgical intervention is indicated for decompression of the spinal cord& root in addition to realignment and stabilization of the spine. Several studies suggest that early surgical decompression leads to better neurological outcomes by preventing deleterious secondary effects of the initial spinal cord injury.

Materials & methods: A total of 112 patients (M-90, F-22) were studied from July, 2015 to March, 2018. Among them, 80 patients had cervical fracture-dislocation, 20 had degenerative disc disease & 12 had acute cervical disc herniation with myelopathic change. In 112 patients, ACDF was undertaken in 80 patients. Steps included identification of the affected vertebra, discectomy & denudation of the articular cartilage of the superior & inferior vertebrae followed by insertion of autogenous iliac crest bone graft into the respective disc space & stabilization by plate & screws. Rest 32 underwent anterior cervical corpectomy with fusion (ACCF) where cage incorporated with bone graft was inserted following corpectomy of the fractured vertebra & denudation of articular cartilage of superior & inferior vertebrae. ACCF was done in patients with comminuted vertebral fractures. Follow up period was 6 months to 5 years. Pre & post-operative assessment were done clinically, assessing radiology, comparing ASIA impairment scale & pain assessment through VAS & ODI scoring.

Results: All patients survived surgery. No improvement in ASIA grading was observed in those having pre-operative ASIA impairment scale of A (12 patients). Other 100 patients (about 87%) had significant improvement in ASIA grading with a conversion into ASIA-E & ASIA-D. Post-operative complications included superficial wound infection & dysphagia in a few patients (2.1%) which were resolved conservatively. No patient needed revision surgery.

Conclusion:ACDF was satisfactory in treating patients with degenerative cervical disc disease, acute disc prolapse & single level cervical fracture-dislocation with varying degree of spinal cord compression while ACCF was done in multilevel or comminuted fractures. Among the procedures, ACDF was found to be superior to ACCF in terms of hospital stay, operation time, blood loss and incidence of complications.

Biography

Ashker Ibne Shams has a specialization in Orthopedics and he is now working as a professor at National Institute of Traumatology and Orthopaedic Rehabilitation, Bangladesh.



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