Mini Open Spinous Process splitting Laminectomy for Cervical Spondylotic Myelopathy

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Background Data: Muscle dissection associated with posterior approaches to the Cervical Spine usually results in local pain, muscle wasting and temporarily restricted neck movement. Use of muscle sparing Spinous Process Splitting Approach for Cervical Laminectomy allows decompression of the spinal cord and neural foramen if needed, it does not require instrumentation and fusion and it preserve Cervical Spine stability.

Purpose: To assess the effectiveness of Spinous Process Splitting Approach for Cervical Laminectomy in Cervical Spondylotic Myelopathy.

Study Design: Prospective study.

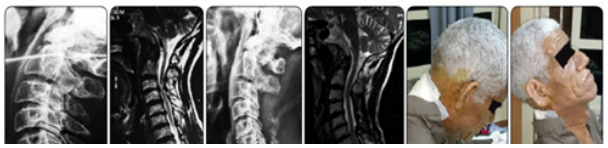
Patient Sample: Fifteen patients with Cervical Spondylotic Myelopathy; the study included 11 males and 4 females; the mean age at surgery was 66.4±6.6 (range 44-71) years.

Outcome Measures: Operative time and blood loss were recorded. Clinical outcome was assessed by the JOA score and VAS. MRI was done 6 months postoperative to assess decompression. Spinal stability and curvature index were assessed on plain cervical radiographs.

Patients and Methods: Fifteen patients underwent muscle Sparing Spinous Process Splitting Cervical Laminectomy.

Results: No case of wound dehiscence was recorded. There was significant improvement of JOA scores and Brachialgia VAS scores at 6 months, the mean JOA recovery rate was 56.2%. No patient had postoperative Kyphosis or instability and 66.6% of patients had improved modified Ishihara Cervical Curvature Index. No neurological deterioration was recorded in the follow-up. No patient had newly developed axial pain. MRI revealed adequate decompression of the spinal cord.

Conclusion: The Spinous Process Splitting Laminectomy allows good spinal cord decompression and preserves Cervical Spine stability. The mini open approach and preservation of interspinous ligaments could play a role in wound dehiscence prevention.



Figures 1: Intraoperative photograph: (A) the arrow shows the spinous process with attached muscles before arrow shows already split spinous process. (B) muscles looks coapted before closure at the end of the surgery. (C) the length of incision was about 6cm to decompress 3 levels.

Figures 2: (A) Preoperative lateral radiograph of 68-year-old man shows lordotic cervical curvature (CCI=34). (B) Preoperative T2-weighted sagittal MRI cervical spine with multilevel canal stenosis from both posterior and anterior. (C) 6 months postoperative lateral radiograph shows 4 levels laminectomy with preserved spinous processes (arrow) and same preoperative CCI. (D) 6 months postoperative T2-weighted sagittal MRI shows successful decompression of the spinal cord. (E) and (F) clinical photos for the patient at the first postoperative day with good active flexion and extension movement.

Speaker Biography

Hatem Hamdy has completed his MBBCH from Kasr Elieny Medical School in 1995. He has acquired his Master degree of Orthopedics in 2007. He completed European Spine Diploma at France in 2016. He has done Fellowship at Nanoori Hospital at Korea in 2016. At present he is Orthopedic and Spine Consultant and Head of Spine unit at One Day Surgery Hospital, Egypt.

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