

Thoracolumbar corpectomy using Minimally Invasive Approach with MaXcess[®], experience in 4 different cases

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Introduction: Anterior neural elements decompression procedures and anterior spinal fusion are effective treatment for thoracolumbar fractures and tumors. The objective is to maintain mechanical stability preventing neurological damage. Thoracotomy and anterior corpectomy are associated with higher morbidity, surgical time and blood loss. Mini-open lateral approach using MaXcess[®] can be considered as a safe alternative to access spine lesions.

Method: A retrospective review of clinical records and radiographs of 4 patients treated with minimally invasive lateral approach with lateral incision using Maxcess[®] to assess thoracolumbar spine with different injuries. Operative findings and clinical outcomes were collected.

Results: 3 patients present spinal foramen narrowing with spinal cord compression, neurological deficit and instability was found after a L1 compression fracture, T12 traumatic fracture and T9 metastatic disease, 1 patient with prior T10 corpectomy presents screw breakage and loosening (neurological symptoms were absent). All patients undergo to a mini- open and lateral access, a corpectomy was performed and cage with autograft were placed in 3 patients. In 1 patient broken screws were extracted and autograft were placed to assure fusion. Internal fixation was needed with pedicular screws, 2 patients received minimally disruptive fixation system. Mean operation room time was 3.4 hours, estimated blood loss was 500cc, hospital stay time was 3 days, no blood transfusion were needed, in 3 patients a Blake drainage was placed for 48 hours with 370cc of blood loss observed. Neurological status improved dramatically with no deterioration in postoperative.

Conclusion: Mini-open lateral approach assisted with Maxcess[®], for thoracic and lumbar corpectomy seems to be safe and effective avoiding many of the associated morbidities of thoracotomies for anterior column reconstruction and stabilization.