

The aim of a study was to evaluate the efficacy and safety of modified [posterior vertebral column resection](#) (PVCR) combined with [anterior column restoration](#) in [elderly patients](#) presenting with thoracic or [osteoporotic thoracolumbar burst fractures](#) with [spinal cord compression](#) and severe [pain](#).

109 patients with one level thoracolumbar osteoporotic fracture and at least 5 years of follow-up were included. They underwent [posterior instrumentation](#) performed with [PMMA](#) augmented [pedicle screws](#). A modified PVCR (unilateral [costotransversectomy](#)+[hemilaminectomy](#)) combined with the insertion of an expandable [titanium cage](#) for anterior column restoration was undertaken. Patients were evaluated clinically and radiographically.

Patients had a mean age of 74.1 and a follow-up duration of 92.3 months. Mean duration of operations, hospital stays, and mean loss of blood were detected as 172.3 minutes, 4.3 days, and 205.4mL. All of the patients were mobilized immediately after surgery. The mean pre-operative local kyphosis angle improved from 39.3° to 4.7° at the last follow-up (p=0.003). Patients' pre-operative mean VAS, JOA, and ODI scores improved from 7.7/8.6/76.3 to 1.6/26.1/17.4(p<0.001 for all), respectively. The average SF-36 MCS/PCS scores at the last follow-up were 55.1/56.8. A dural tear was detected intra-operatively in one patient and repaired immediately.

Subtotal PVCR combined with the insertion of an expandable titanium cage was detected as a safe and effective method for osteoporotic vertebrae fractures' sequelae in the elderly population involving spinal cord compression, by enabling the decompression of the [spinal canal](#) and reconstruction of the resected segment, resulting in significant improvement in clinical and radiographic outcomes ¹⁾

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Pehlivanoglu T, Erdag Y, Oltulu I, Akturk UD, Korkmaz E, Yildirim K, Sarioglu E, Gun K, Ofluoglu E, Aydogan M. Unilateral Posterior Surgery for Severe Osteoporotic Vertebrae Fractures' Sequelae in Geriatric Population: Minimum 5-Year Results of 109 Patients. Neurospine. 2021 Mar 4. doi: 10.14245/ns.2040812.406. Epub ahead of print. PMID: 33657776.

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