

Sakaura et al., reported that the presence of chronic kidney disease (CKD) and/or extended abdominal aortic calcification was associated with significantly worse clinical outcomes after [posterior lumbar interbody fusion](#). CKD is one of the highest risk factors for systemic atherosclerosis. Therefore, impaired blood flow due to atherosclerosis could exacerbate degeneration of the cervical spine and neural tissue. However, there has been no report of a study evaluating the deleterious effects of CKD and atherosclerosis on the outcomes after decompression surgery for [cervical spondylotic myelopathy](#).

They analyzed data from 127 consecutive cases involving patients who underwent [cervical laminoplasty](#) for CSM and met their inclusion criteria. Stage 3-4 CKD was present as a preoperative comorbidity in 44 cases. Clinical status was assessed using the Japanese Orthopaedic Association (JOA) cervical myelopathy evaluation questionnaire before surgery and 2 years postoperatively. As a marker of systemic atherosclerosis, the presence of aortic arch calcification (AoAC) was assessed on preoperative chest radiographs.

AoAC was found on preoperative chest radiographs in 40 of 127 patients. Neither CKD nor AoAC had a statistically significant deleterious effect on preoperative JOA score. However, CKD and AoAC were significantly associated with reductions in both the JOA score recovery rate (mean 36.1% in patients with CKD vs 44.7% in those without CKD; 26.0% in patients with AoAC vs 48.9% in those without AoAC) and the change in JOA score at 2 years after surgery (mean 2.3 points in patients with CKD vs 3.1 points in those without CKD; 2.1 points for patients with AoAC vs 3.2 points for those without AoAC). A multivariate regression analysis showed that AoAC was a significant independent predictor of poor outcome with respect to both for the difference between follow-up and preoperative JOA scores and the JOA score recovery rate.

CKD and AoAC were associated with increased rates of poor neurological outcomes after laminoplasty for CSM, and AoAC was a significant independent predictive factor for poor outcome <sup>1)</sup>.

<sup>1)</sup>

Sakaura H, Miwa T, Kuroda Y, Ohwada T. Surgical outcomes after laminoplasty for cervical spondylotic myelopathy in patients with renal dysfunction and/or aortic arch calcification. J Neurosurg Spine. 2016 Oct;25(4):444-447. PubMed PMID: 27231811.

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