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Can anterior cervical discectomy (ACDF) be more effective and safe than corpectomy with anterior access (ACCF) in the treatment of cervical spondylogenetic myelopathy? Preoperative clinical condition can influence the choice of strategy?

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Controversy exists regarding the optimal type of approach for the surgical treatment of cervical spondylogenic myelopathy. The choice between anterior, posterior, and combined approaches for cord decompression is primarily based on the sagittal alignment of the spine, extent of disease, location of compression, concomitant deformity, presence of preoperative neck pain, and previous operations

In this work we explored the efficacy and safety of anterior cervical corpectomy and fusion (ACCF) compared to anterior cervical discectomy and fusion (ACDF) in the treatment of cervical spondylotic myelopathy and if the clinical condition can influence the choice of strategy

Several literature databases were searched. Our study retrospectively reviewed the history of patients who underwent surgical treatment for CSM maximum 3 levels from 2015 to 2020, 23 males and 18 females. The mean age was 58.3 ± 9.8 years. The study compared perioperative parameters (blood loss, operation times), complications (CSF, dysphonia, epidural hematoma, C5 palsy, dysphagia), complications related to the graft and/or implant, clinical parameters (JOA score) and radiological parameters (segmentary lordosis, fusion)

In line with the literature our analysis revealed that the CSM patients in the ACDF group showed less blood loss and fewer complications, compared to those in the ACCF group. The operation time of CSM patients in the ACDF group was also shorter than those in the ACCF group. However, ACDF was associated with significantly less blood loss, less segmental height loss, greater increase in sagittal lordosis, shorter operating times, and shorter hospital stay with the same clinical outcome

Our results and comparison with the literature provide evidence that in selected cases ACDF may be more effective and safe than ACCF for the treatment of spondylogenetic cervical myelopathy with the same clinical outcome. Preoperative clinical condition can influence the choice of the best strategy

Fig. 1