

# The Relationship Between Gastrointestinal Comorbidities, Clinical Presentation and Surgical Outcome in Patients with DCM: Analysis of a Global Cohort

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### Introduction

Degenerative Cervical Myelopathy (DCM) presents most frequently in patients 50 years or older. Gastrointestinal comorbidities (GIC) commonly occur in this group, however, their relationship with DCM has not been thoroughly investigated. Herein, we investigate the difference between patients with or without GICs who are surgically treated for DCM.

### Methods

757 patients with clinical data and 458 with MRI data from the AOSpine -North America and AOSpine-International study on DCM were evaluated. GICs were obtained at presentation and included gastric, intestinal, hepatic and pancreatic conditions. Patients were dichotomized into 2 groups: with GIC and without GIC. Clinical and MRI presentation, and baseline neurological and functional status were compared. Neurological and functional outcome at 2-years followup were also compared. GICs were present in 121 patients (16%). These patients were less commonly male (48.76% vs 65.4%, p=0.001), were slightly less neurologically impaired based on Nurick grade (3.05?1.10 vs 3.28?1.16, p=0.044) but not based on mJOA (12.74?2.62 vs 12.48?2.76, p=0.33), had a worse general heath score (71.27?16.88 vs 75.22?17.08, p=0.022), and worse neck disability (46.31?20.04 vs 38.23?20.44, p<0.001), and a lower prevalence of upper motor neuron signs (hyperreflexia, 70.2% vs 78.9%, p=0.037; Babinski's sign 24.8% vs 37.3%, p=0.008). On MRI, GIC patients less commonly exhibited signal intensity changes (T2 hyperintensity, 49.2% vs 75.6%, p<0.001; T1 hypointensity, 9.7% vs 21.1%, p=0.036) and had a lower number of T2 hyperintensity levels (0.82?0.98 vs 1.3?1.11, p=0.001). There was no difference in surgical outcome.

### Conclusions

Results

Patients with GICs are more likely to be female and have significantly more general health disability. However, these patients have less clinical and MRI features consistent with severe neurological impairment. This constellation of symptoms is considerably different than that typically observed in DCM and it is

## Learning Objectives

By the conclusion of this session, participants should be able to: 1) Describe the importance of the presents of gastrointestinal comorbidities in patients with DCM with regards to clinical presentation and surgical outcome. 2) Discuss, in small groups how gastrointestinal comorbidities impacts clinical management. 3) Identify an effective treatment strategy for dealing with gastrointestinal comorbidities in the setting of DCM.

#### References

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