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SURGICAL MANAGEMENT OF CERVICAL MYELOPATHY: AN ANALYSIS OF PATIENT CHARACTERISTICS, SURGICAL PROCEDURES, COMPLICATION RATES, AND RISK FACTORS

Introduction/ Aim

Baseline patient characteristics, non-operative treatment modalities, surgical procedures, and complication rates of surgical cervical myelopathy patients were investigated, along with complication risk factors and HRQOL changes from baseline to 2 years post-operatively.

Materials and Methods

A retrospective review of a prospectively collected database of cervical myelopathy patients was performed. Baseline patient demographics, comorbidities, clinical information, non-operative treatment modalities, surgical procedures, and complication rates were collected. HRQOL outcomes were assessed by SF-36 PCS, MCS, NDI at baseline and 2 years post-operatively. Statistical analyses included paired sample t-tests and multivariate logistic regression, controlling for age, gender, and BMI.

Results

203 surgical CSM patients (43% female) were included. Average age and BMI were 57.7 yrs and 29.6 kg/m², respectively. At baseline, patients presented with mostly neck pain (51%), arm pain (45%), and sensory deficits (25%). Patients underwent pre-operative conservative treatment modalities, predominantly NSAIDs (34%) and analgesics (32%). Overall complications rate was 7.4%, notably including CSF leak and other complications (2.5% each). Only previous cervical spine surgery was a risk factor for complications (OR:9.22, p=0.034). Average HRQOL scores between baseline and 2-years post-op significantly improved for PCS, MCS, and NDI scores.

Discussion

It is important to identify and analyze risk factors for surgical complications as well as to assess patient-reported outcomes. This series revealed a total surgical complications rate of 7.4%. Previous cervical spine surgeries increased the risk of complications 9-fold. No other baseline information collected was associated with increased complication risk. The study population significantly improved in PCS, MCS, and NDI scores two years after surgery.

Conclusion

History of previous cervical spine surgeries increased the risk of complications, however, the study population significantly improved in patient-reported outcomes two years post-operatively.