Cervical Spondyloptic Myelopathy Awareness Project

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Disclosures

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Introduction

Public Health Awareness programs have proven effective in reducing the clinical consequences of occult diseases that can be successfully treated with early recognition and treatment (Breast Cancer, Prostate Cancer, AIDS, Stroke). However, these programs have not been widely applied to Neurosurgical illnesses. Cervical spondylotic myelopathy (CSM) is a gradually progressive neurologic condition that arises as a result of compression of the cervical spinal cord, typically resulting from degenerative cervical spine disease. Patients demonstrate a varied clinical course with the eventual possibility of severe motor and sensory dysfunction. Early symptoms of CSM can appear occult to both affected patients and their clinicians. Timely detection of CSM can improve outcomes, but once severe myelopathic symptoms arise complete reversal is rare. This complex clinical presentation of CSM may lead to a delay in appropriate treatment for patients, a lack of epidemiological data, and a paucity of information illuminating disparities in CSM care. As such, CSM fits the public health criteria that improved outcomes may be possible through greater awareness. We report on initial efforts to apply public health methodology to characterize disparities in diagnosis & treatment outcomes in patients with CSM.

Methods

A retrospective chart analysis of over 2000 patients with possible diagnosis of CSM was completed within the Loyola University Health System. Diagnoses were confirmed by corresponding ICD code, diagnosis specification in physician note, and evidence of adequate imaging. Demographic data were collected on all patients that correlate to social determinants of health care outcomes. Data collected related to CSM outcome included: temporal course of illness duration, time to neurological referral, specialty of referring physician, and ultimate patient outcome in terms of neurological deficit and neurosurgical management. Descriptive statistics used to analyze demographic and socioeconomic data, and multiple logistic regression models will be used to determine correlation between major variables and effect patient outcomes.

Results

Data collection is currently ongoing with this project. The following results were taken from about 50% of the final data points. All data is preliminary :

![Referring Physicians](image)

Referring Physicians

- Orthopedics: 23%
- Neurology: 6.80%
- Neurosurgery: 6.80%
- Primary Care: 6.80%
- Immediate Care: 4.730%
- ED: 6.80%
- Other: 1.40%

Conclusion

Cervical spondylotic myelopathy is a potentially devastating disease. The damage and disability from this disease process can be prevented; restoring years of productivity and healthy living to CSM patients. This project is a novel application of public health principles to an increasingly relevant neurosurgical problem. Though analysis is incomplete, we have been able to glean important insights, chief among them is the role of general practitioners. Primary care physicians are important stakeholders in timely CSM referral. Engaging and empowering them to recognize CSM symptoms earlier may improve patient outcomes. Additionally, as more data points are collected relationships between CSM outcomes in patients with advanced diabetes, distance patients have to travel to see specialists, and root causes for erroneous referrals to a non-neurosurgeon/spine specialist will be examined; along with more traditional areas where disparity commonly exists, such as: race/ethnicity, insurance status, and gender.

References