

ORIGINAL RESEARCH

Etiological Spectrum of Myelopathy (Except Longitudinally extensive Transverse Myelitis) in Tertiary Care Institute of Eastern India in Dept. of Neurology

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ABSTRACT

Background: Myelopathy can refer to any form of spinal cord pathology whereas myelitis refers to an inflammatory or infectious process. The present study was conducted to assess etiological Spectrum Of myelopathy in a tertiary care institute of Eastern India in Dept. of Neurology.

Material and methods: The present study was conducted to assess etiological Spectrum of myelopathy in a tertiary care institute of Eastern India in Dept. of Neurology. The number of patients included in the study was 50 patients of non-traumatic compressive myelopathy. Patients were clinically evaluated and relevant routine biochemical analysis and appropriate neuroimaging studies were carried out in all.

Results: In the present study 50 patients of non-traumatic myelopathy were included. Various etiologies of compression myelopathy in 50 patients were Tuberculosis Potts with paravertebral abscess in 34% patients, cervical spondylosis in 24% patients, Benign neoplasm in 12% followed by CV anomalies in 6% patients.

Conclusion: The present study concluded that Tuberculosis Potts with paravertebral abscess was the most common etiology of non-traumatic compressive myelopathy.

Keywords: non-traumatic myelopathy, compression myelopathy, cervical spondylosis.

INTRODUCTION

Diseases of the spinal cord are termed as myelopathies. Myelopathies can be either traumatic or non-traumatic. Non-traumatic myelopathies are of two types: compressive myelopathies and non-compressive myelopathies. The clinical presentation and causes of compressive myelopathies characteristically differ from those of non-compressive myelopathies, although rare presentations in either category can mimic each other and pose a diagnostic dilemma to the clinician.¹ Acute non-compressive myelopathies include heterogeneous conditions that result in spinal cord dysfunction. Dysfunction of ascending and descending axons and local neural circuits is reflected by various myelopathic signs and symptoms. Disease spectrum ranged from demyelination, infection, nutritional, toxic, and heredo-familial to degenerative conditions.² The present study was conducted to assess etiological Spectrum Of myelopathy in a tertiary care institute of Eastern India in Dept. of Neurology.

MATERIAL AND METHODS

The present study was conducted to assess etiological Spectrum Of myelopathy in a tertiary care institute of Eastern India in Dept. of Neurology. The study was given approval on 16/6/2020. The number of patients included in the study was 50 patients of non-traumatic compressive myelopathy. Patients were clinically evaluated and relevant routine biochemical analysis and appropriate neuroimaging studies were carried out in all. All cases with no obvious compression visible on MRI underwent further investigations which included serum HIV, VDRL, Mantoux, ESR, X-ray chest, collagen profile (ANA, RA factor, anti-dsDNA, LE cell phenomenon and antiphospholipid antibody), serum B12 and homocysteine levels, bone marrow, upper gastrointestinal endoscopy and intrinsic and antiparietal cell antibody. CSF examination was done to rule out secondary causes including OCB.

RESULTS

In the present study 50 patients of non-traumatic myelopathy were included. Various etiologies of compression myelopathy in 50 patients were Tuberculosis Potts with paravertebral abscess in 34% patients, cervical spondylosis in 24% patients, Benign neoplasm in 12% followed by CV anomalies in 6% patients.

Table 1: Etiological profile of nontraumatic compressive myelopathy (n=50)

Diagnosis	Nontraumatic compressive myelopathy
Potts vertebral osteomyelitis	5(10%)
Tuberculosis Potts with paravertebral abscess	17(34%)
Tubercular arachnoiditis	2(4%)
Benign neoplasm	6(12%)
Malignant neoplasm (secondaries)	2(4%)
Multiple myeloma	2(4%)
Cervical spondylosis	12(24%)
Cranio-vertebral junction anomalies	3(6%)
Meningomyelocele	1(2%)
Arterio-venous malformation	2(4%)
Epidural abscess	1(2%)
Total	50(100%)

DISCUSSION

The term myelopathy describes pathologic conditions that cause spinal cord, meningeal or perimeningeal space damage or dysfunction. Traumatic injuries, vascular diseases, infections and inflammatory or autoimmune processes may affect the spinal cord.³

In the present study 50 patients of non-traumatic myelopathy were included. Various etiologies of compression myelopathy in 50 patients were Tuberculosis Potts with paravertebral abscess in 34% patients, cervical spondylosis in 24% patients, Benign neoplasm in 12% followed by CV anomalies in 6% patients.

Kamble S et al did a study to study the clinical, radiological, cerebrospinal fluid profile of non compressive myelopathy and to study various etiologies of non-compressive myelopathies in causation of quadriplegia and paraplegia. The study had 80 patients with a median age of 38 years and male: female ratio 1.5:1. Patients were divided into acute myelopathy and chronic myelopathy. Forty four patients presented with acute myelopathy whereas 36 patients had chronic myelopathy. The causes of Acute myelopathy were post infectious myelitis (13), neuromyelitis optica spectrum disorder (NMOSD) (6), multiple sclerosis (MS) (2), connective tissue disorders (1), acute disseminated encephalomyelitis (4) and Idiopathic (18). The causes of Chronic myelopathy were Vitamin B12 deficiency (8), MS

(2), mixed connective tissue disease (1), Copper deficiency (1), hepatic myelopathy (1), radiation (1), hereditary spastic paraparesis (1) and idiopathic (21).⁴

Chaurasia RN et al conducted a study to identify the clinical and radiological profile of non-traumatic myelopathies and various etiologies associated with them. Among 204 patients of non-traumatic myelopathy, 108 patients presented with paraplegia and 96 patients with quadriplegia. Tuberculosis was the commonest cause of compression paraplegia in this series and was observed in 42 cases (33.33%) while quadriplegia was seen in only 3 cases (2.38%). In the present study, acute transverse myelitis formed the major bulk of non-compressive myelopathy.⁵

Another study from North India had 57 patients between 1997 and 1999.^[2] The causes of myelopathy included Vitamin B₁₂ deficiency, primary progressive MS, hereditary spastic paraplegia, tropical spastic paraplegia, syphilitic myelitis, VZV myelitis, subacute necrotizing myelitis, and radiation myelopathy. Myelopathy could not be classified in four patients. Thirty-one (54.4%) patients were labeled ATM. Etiology of ATM was not clearly known in these patients. Antecedent events in the form of febrile illness, chicken pox, and vaccination were present in 13 patients of ATM. CSF specific OCBs were present in four patients and two patients reported a recurrence of symptoms. Some of these cases could have been MS or NMOSD.⁶

CONCLUSION

The present study concluded that Tuberculosis Potts with paravertebral abscess was the most common etiology of non-traumatic compressive myelopathy.

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