Clinical Profile of Multiple Sclerosis in Kashmir (India): A Tertiary Care Hospital Based Study

Bashir Ahmad Sanaie¹, B Zahwa², Hardeep Singh³

¹Consultant Neurologist, Department of Neurology, Super Speciality Hospital, Government Medical College, Srinagar, Jammu and Kashmir, India, ²Student, Department of Neurology, Super Speciality Hospital, Government Medical College, Srinagar, Jammu and Kashmir, India, ³Professor, Department of Neurology, Super Speciality Hospital, Government Medical College, Srinagar, Jammu and Kashmir, India

INTRODUCTION

Multiple sclerosis (MS) is a chronic inflammatory demyelinating disorder of the central nervous system occurring worldwide resulting from immune response to myelin and to some extent to axons also. It is well recognized since the early description of Charcot. It is believed to be an autoimmune disorder with variability in frequency, severity and chronicity. MS was considered to be non-existent in Kashmir (India) till 1994.²

There has been an increase in the number of diagnosed cases in recent times with the growth of neurology as a sub-speciality in Kashmir (India) and availability of modern diagnostic tools like magnetic resonance imaging (MRI). Optic nerve and spinal cord involvement are more common in the Asian variety of MS.³ In present study we studied clinical pattern of MS in Kashmir (India).

MATERIALS AND METHODS

This study was conducted in Inpatient and Outpatient Departments of Neurology, Government Medical College and associated Hospitals Srinagar Kashmir (India). Totally 25 patients with varying clinical presentation were analyzed. Relevant investigations were done to diagnose MS and to exclude other MS mimicking conditions.

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Corresponding Author: Dr. Bashir Ahmad Sanaie, Department of Neurology, Superspeciality Hospital, Government Medical College, Srinagar, Jammu and Kashmir, India. Phone: +91-9419063190. E-mail: drb_ahmad@yahoo.com
function test, blood sugars, collagen vascular profile, venereal disease research laboratory, and sarcoidosis profile were studied. Cerebrospinal fluid (CSF) for oligoclonal bands (OCBs), visual evoked potentials and brainstem auditory evoked response were done in some cases. MRI brain was done in all cases and MRI spinal cord in most of the cases. The cases were diagnosed according to Poser’s diagnostic criteria (Table 1). No case of Devic’s disease was included in the study.

RESULTS

The patients enrolled in the study were categorized as definite or probable MS. The mean age of onset was 33.5 years in males and 26.40 years in females. The youngest patient was 18 years and the oldest 55 years of age. Maximum number of cases were found in the second and fourth decade. Male: female ratio was 1:1.57. The proportion of definite and probable cases was 64% and 36%, respectively.

Demographic characteristics

<table>
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<td>Relapses</td>
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<td>LSPMS D1</td>
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Table 1: Poser criteria

MS: Multiple sclerosis, CSF: Cerebrospinal fluid

As far as clinical course of MS is concerned relapsing-remitting MS was seen in 72% cases, followed by secondary progressive MS in 20% and primary progressive MS in 8% and none of progressive relapsing MS was seen (Figure 1).

The most common presentation of MS was pyramidal tract involvement in 70% of cases, followed by sensory symptoms in 50%, visual symptoms in 40% of cases, bladder involvement in 20%, cerebellar in 25% and trigeminal neuralgia in 10% of cases (Figure 2).

Investigations including haemogram, biochemistry, and other relevant investigations were normal. CSF examination revealed OCB positivity in 8% of cases only. MRI was compatible with MS in 60% of cases. MRI cervical and dorsal spine were compatible with MS in 16% of cases (Figure 3).

DISCUSSION

MS is less common in tropical countries. Epidemiological data are unavailable. Existing data have been obtained from small often retrospective studies from different parts of the country. Consideration of illness as insignificant by the patients or reluctance on the part of treating doctor to consider the diagnosis of MS because of low frequency may be contributory for reported lower incidence.

The present study has documented female to male ratio of 1:1.5. Five studies6-10 have shown male preponderance (range 1.25-2), and one study11 has shown female preponderance.

Kurtzke et al.12 have shown female predominance (female: male - 1.8:1) among US veterans.
Sahraian et al.\textsuperscript{13} reported in Iran that mean age of onset was similar to other studies but the calculated prevalence of early onset MS was increased. The cumulative data indicate that the female to male ratio is increasing annually.

Börü et al.\textsuperscript{14} reported that clinical features and course of MS patients in Turkey were typical of European MS. Turkey is a high-risk MS area. The present study has shown similar clinical features and course.\textsuperscript{15}

Deleu et al.\textsuperscript{15} reported that Qatar is a medium to high-risk area for MS in some different clinical characteristics as compared to other countries. Present Etemadifer et al.\textsuperscript{16} reported that MS rate in Isfahan Iran is highest in the middle east. A possible explanation could be enhanced diagnosis of MS with MRI, revised MacDonald criteria, increasing number of neurologists and increasing younger population, etc.

Same criteria are responsible for diagnosing and identifying MS patients in our study as previously before MRI era and scarcity of neurologists MS was considered almost non-existent in Kashmir (India).

Browne et al.\textsuperscript{17} reported that number of MS cases increased 2.1 million in 2008 to 2.3 million in 2013 reasons being improved health care, support services, inequity in the availability of services, number of MS groups and organizations worldwide have increased.

Orton et al.\textsuperscript{18} reported that substantial increase in the female to male sex ratio in Canada seems to result from a disproportional increase in the incidence of MS in women.

Koch-Henriksen and Sørensen\textsuperscript{19} reported that in even distribution of MS across populations can be attributed to differences in genes and the environment and their inter-relationship.

Cerreta\textsuperscript{20} reported that MRI findings have proved to be useful diagnostic test in the initial evaluation and monitoring of patients with MS. It provides quantitative assessment of the disease and progression during clinical trials. The present study also revealed MRI positivity in significant number of patients and this diagnostic entity has revolutionized the diagnosis of MS.

Pugliatti et al.\textsuperscript{21} reported prevalence rates are higher for women for all countries considered. Highest prevalence rates have been estimated from the age group 35-64 years for both sexes and all countries.

Singhal and Wadia\textsuperscript{6} in their study of 30 patients from the Bombay region observed that MS patients were mostly from higher socio-economic status. The present study revealed patients belonging to different social strata.

Heydarpour et al.\textsuperscript{22} reported that recent advances in MS registries will allow nationwide studies and temporal comparisons between countries provided that age and sex standardized estimates are available.

**CONCLUSION**

We conclude that MS is not uncommon in Kashmir (India). There was a greater preponderance of women as seen worldwide. However clinical pattern conforms more to the “Asian variety” of MS. MRI positivity was lesser as compared to western series. The OCBs in CSF were less seen than in other Asian and western countries.

**REFERENCES**


