MULTIPLE SCLEROSIS

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Multiple sclerosis is perhaps not rare in N.W.F.P. Here are case reports of two patients, recently admitted in our unit at the Postgraduate Medical Institute, Lady Reading Hospital, Peshawar, within a space of three months.

CASE – 1

A 26 years old woman was admitted with the complaints of weakness in all four limbs and diminution of vision for one month. The weakness started in her left lower limb, later affecting the right lower limb as well. After about a week, the upper limbs were involved first left and then the right side. She also had back pain of aching character which was aggravated by movements. Three years ago she was admitted for paraplegia with sensory loss upto the umbilicus. She made gradual but complete recovery.

On examination, she was alert and cooperative with intact memory and normal intellect. There was no spinal deformity or tenderness. She had bilateral optic atrophy and upper motor neurone type palsy of the right seventh nerve. Her limbs were not wasted but had increased tone, more so on the left side. She could not move left upper and lower limbs against gravity. Right side showed lesser but definite loss of power. The tendon reflexes in the right upper limbs were normal. Rest of the limbs showed exaggerated tendon reflexes and sustained ankle clonus on the left side. Both planters were extensor. She had ataxia of both upper limbs but no nystagmus. There was no sensory deficit. CSF examination revealed increased globulins. Serological tests for syphilis were negative. Anti-nuclear factor was negative.

CASE – 2

A 21 year old girl was admitted with the complaints of inability to walk for twenty days. She had incontinence of urine and had attacks of severe bilateral facial pain. She was admitted and investigated for paraplegia seven years ago. No cause was found, and was sent home on steroids. There was subjective improvement and she became mobile. She had gradual deterioration of vision in her left eye and now her right eye was painful with diminished vision. On examination she was febrile 102°F, asthenic, conscious, oriented in time and space. She had no evident spinal lesion. Her cranial nerves were intact apart from total loss of vision on the left side, diminution of vision in the right eye and bilateral optic atrophy. She had normal tone in the upper limbs and decreased tone in lower limbs, more marked on the right side. She could not move her lower limbs but had normal power in the upper limbs. Sensory system was intact. The tendon reflexes in both upper, and right lower limb were

normal. The left lower limb showed exaggerated ankle jerk and also unsustained ankle clonus. Planters were equivocal. She had no cerebellar signs. The facial pain (Tic Deloreux) disappeared on its own on the left side, but remained on the right side. During her stay she developed retention of urine for which she was catheterised. Her fever was due to urinary tract infection. Lumbar puncture showed clear CSF with normal pressure. Microscopy of CSF showed 2 RBC/mm^3 and 18 WBC/mm^3, all lymphocytes. Biochemistry of CSF showed protein 100 mg/dl, with increased globulins and normal sugar. She was negative for serological markers of Syphilis and immunological markers of SLE.

DISCUSSION

Multiple sclerosis is principally a disease of white matter of the central nervous system and consists of scattered lesions of myelin loss, usually preserving the axons. Loss of myelin results in aberrant conduction which is responsible for signs and symptoms of the disease.

Because of difficulties of cases ascertainment and precise diagnosis, the prevalence of multiple sclerosis is difficult to determine. " The world can be categorized into low, medium and high prevalence zones with increasing distance from the equator but frequency also varies in some regions of similar latitude and between racial groups living in the same area."[1]

The geographical distribution may in part be due to meteorological factors, however there is also correlation with the frequency of HLA-DR2 in normal individuals [2]. The genetic factors alone can not explain the prevalence, and the aetiology is multifactorial. Attention has recently been centered on three possible interrelated factors: lipid metabolism, autoimmunity, and infection, each in turn supported by clinical and experimental data.

Multiple sclerosis has protean manifestations. The onset of the disease may be monosymptomatic with evidence of a single lesion of the central nervous system in 55% of cases or there may be symptoms of multiple lesions at the onset.

Table I shows the Prevalence of different symptoms in Multiple Sclerosis modified from Poser CM[3].

TABLE – 1
NEUROLOGIC SIGNS AND SYMPTOMS OF MULTIPLE SCLEROSIS

	Percentage of Occurance
Occular disturbance	85
Nystagmus	70
Muscle weakness	96
Spasticity or hypereflexia or both	98
Babinski sign	92
Absent abdominal reflexes	77
Gait ataxia	55
Dysarthria or intention tremor	79
Dysarthria or scanning speech	61
Urinary disturbance	82
Paresthesia	65
Alteration of vibratory sensation	61
Alteration of position	55
Alteration of pain sensation	47
Alteration of touch sensation	28
Alteration of temperature sensation	17
Mental disturbance	45
Facial weakness	35
Pain	19
Vertigo	15
Headaches	08
Convulsions	07
Dysphagia	15
Ptosis	02
Decreased hearing	08
Tinnitus	03
Changes in state of consciousness	04

The course of the disease is repeated relapses and remissions in 80% of patients and of steady progressive disability in the remainder. In the remitting form it is usual for complete recovery to follow the initial attack, but every subsequent relapse adds to increasing disability. Ultimately death results from respiratory paralysis, bed sores, urinary infection, status epilepticus or coma of undetermined nature. Over the years, a number of criteria for the classification of multiple sclerosis patients have been proposed, the one proposed; by Augutus S Rose et al is as follow:–[4]

I. Clinically Definite Multiple Sclerosis

   a. Relapsing and remitting course with at least two bouts separated by no less than one month: or,
   b. Slow or stepwise progressive course extending over at least 6 months.
   c. Documented neurological signs attributable to more than one site of 4 predominantly white matter central nervous system pathology.
   d. Onset of symptoms usually between ages of 10 and 50.
   e. No better neurological explanation.

II. Probable Multiple Sclerosis

   a. History of relapsing and remitting symptoms but without documentation of signs and presenting with only one neurological sign commonly associated with multiple sclerosis or,
   b. A documented single bout of symptoms with signs of multifocal white matter disease with good recovery, and followed by variable symptoms and signs.
   c. No better neurological explanation.

III. Possible Multiple Sclerosis.

   a. History of relapsing and remitting symptoms without documentation of signs or,
   b. Objective neurological signs insufficient to establish more than one site of central nervous system white matter pathology.
   c. No better neurological explanation.

Paraclinical evidence of central nervous system lesions may be elicited by various means, including induced hyperthermia, evoked response studies. CT and NMR scans. Gamma globulin content of CSF is increased in 60% to 80% of patients. This IgG is of monoclonal in origin, synthesized in the CNS of the patient and finding of oligoclonal cerebrospinal fluid IgG may be strongly confirmatory of the diagnosis" [5].

REFERENCES

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