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TO DETERMINE THE VARIOUS MODES OF PRESENTATIONS OF MULTIPLE SCLEROSIS

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Abstract:

Objective: *To describe different modes of presentation of multiple sclerosis in the Pakistani population and to demonstrate that multiple sclerosis may present with a wide variety of signs and symptoms.*

Place and Duration: *In the medical and neurological department of Khyber Teaching Hospital, Peshawar for one year duration from September 2018 to August 2019.*

Methods: *This one-time observational study was conducted in the neurology and medical services of the Khyber Teaching Hospital, Peshawar for one year duration from September 2018 to August 2019. Patients and their families were selected according to relevant interview samples. The data was collected in a specially designed form. 30 patients were included in the study. All patients were evaluated by clinical examination, blood tests, CSF and magnetic resonance imaging. Data were analyzed using SPSS version 18.*

Results: *The average age was 29.43. About 57% of patients were women. Only 16% of patients reported for the first time, while the rest had a history of previous attacks. Most patients had more than one symptom on admission. Visual disturbances, alone or with other symptoms, occurred in approximately 63% of patients. 80% of patients were weaker. Urinary incontinence occurred in 40% of patients. Cerebellar results were found in 17% of patients. In 13% of patients, multiple sclerosis is manifested by paraesthesias.*

Conclusion: *It has been proven that relapses can be delayed by early treatment. In addition, if neurological symptoms cannot be explained by another neurological disease, multiple sclerosis must be consider consider in differential diagnosis.*

Keyword: *multiple sclerosis, presentation, multiple sclerosis*

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INTRODUCTION:

It's been over 100 years since Charcot, Carswell, Cruveilhier and others defined the clinical and pathological features of multiple sclerosis[1-2]. Multiple sclerosis is an incurable neurological disease that often causes chronic disability. Neurologists approach the diagnosis with fear. "I'll end up in a wheel chair" is the mournful cry of a newly diagnosed, mainly young man[3-4]. It is considered the most common chronic inflammatory demyelinating disease of the white matter of the central nervous system and a common cause of disability in young adults. Epidemiological and genetic studies include many factors of multiple sclerosis etiology, including exposure to infectious, chemical or physical factors that destroy the blood-brain barrier and initiate an autoimmune response to myelin breakdown products. Potentially harmful exposures such as X-rays, radiological tests and ionizing radiotherapy, none of which are sufficient. Multiple sclerosis is not Mendel's hereditary disease[5-6]. The risk of multiple sclerosis is also associated with an environmental factor. It appears to be an oligogenic or multi-genetic disorder with a seemingly similar phenotype for the various genes involved. Studies show that there is a significant increase in the cumulative total incidence of autoimmune diseases in first-degree relatives of patients with multiple sclerosis[7-8]. Patients with primary progressive multiple sclerosis did not differ from patients with relapsing or secondary remission of progressive multiple sclerosis at the personal or familial onset of autoimmune disease[9]. This study finds that people with multiple sclerosis generally have a genetic predisposition to autoimmunity. The incidence of multiple sclerosis varies widely across ethnic groups around the world. Northern Europe, South Australia and central North America are more prevalent areas. Multiple sclerosis is not uncommon in Pakistan, especially in the northern regions.

MATERIALS AND METHODS:

This is a descriptive study conducted at the medical and neurological department of Khyber Teaching Hospital, Peshawar for one year duration from September 2018 to August 2019.Thirty subsequent cases were included in the study. The appropriate sampling technique was used to select patients. To evaluate different ways to offer multiple sclerosis. 30 patients were evaluated. All patients or their relatives were interviewed with a detailed history. Patients were evaluated using a detailed history, research and study, and data was entered into a specially designed form. To confirm and rule out simulation conditions, the following studies were performed in patients with suspected multiple sclerosis. The data was analyzed in the SPSS computer program version 18.0. Frequency of various signs and symptoms measured as a percentage. The results are compared with existing national and international literature.

RESULTS:

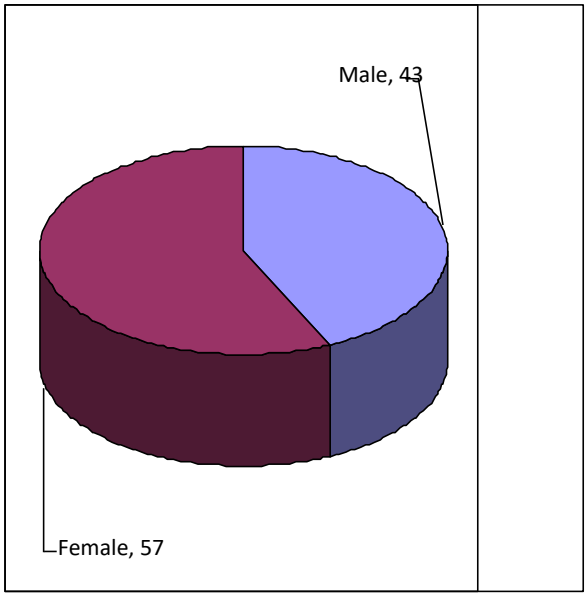
The study included 30 patients.The average age of patients was 29.3 43 years 10.15. Their age range is from 15 to 55 years. Of these 17(57%) were females with age range of 15 to 47 years with their mean age of 27.18 8.20. The remaining 13 patients (43%) were 20-55 years old and the average age was 32.38 11.95. (Chart 1) Most patients had signs and symptoms with localized MRI lesions. Multiple sclerosis has protein manifestations, and patients most often show us many symptoms. Most patients have had previous attacks, i.e. 84% (24) had relapses and healing. Weakness of a part of the body was the presenting complaint in 80% of patients. This weakness is also divided into para-paresis, quadri-paresis, hemi-paresis and mono-paresis (Fig. 2). Strength was assessed with a score of 2/5, 3/5, 4/5, 5/5 (Table 1). The second most common presentation in our study was the visual change we found in 19 (63%) patients. The visual change was unilateral or bilateral. Amongst signs, we studied plantar and deep tendon reflexes. Exaggerated or brisk deep tendon reflexes and extensor planters was a frequent finding in our study population (Table 1). Magnetic resonance imaging is one of the few methods available to confirm clinical features. An abnormal MRI was detected in 24 patients (80%) and an unusual MRI was found in 6 patients (20%). Some patients had more than one plaque. There were several areas in the brain and spinal cord (Table 2)

Table 1: Signs & symptoms reported in our study

	Male	Female	Total
Mean Age	32.38 11.95	27.18 8.20	29.43 10.15
Weakness	69% (9)	88% (15)	80% (24)
Power	69% (9)	88% (15)	80% (24)
Grade I	15% (2)	12% (2)	13% (4)
Grade II	15% (2)	23% (4)	20% (6)
Grade III	38% (5)	53% (9)	47% (14)
Grade IV	31% (4)	12% (2)	20% (6)
Visual disturbance	26% (8)	37% (11)	63% (19)
Unilateral	46% (6)	35% (6)	40% (12)
Bilateral	15% (2)	29% (5)	23% (7)

Optic neuritis	61%(8)	41%(7)	50%(15)
Nystagmus	15%(2)	11%(2)	13%(4)
Urinary incontinence	38% (5)	41% (7)	40% (12)
Dysarthria	8% (1)	35% (6)	23% (7)
Paraesthesias	15% (2)	12% (2)	13% (4)
DTR brisk	62% (8)	88% (15)	77% (23)
Babinski	85% (11)	82% (14)	83% (25)
MRI	85% (11)	76% (13)	80% (24)
Mono-symptomatic	15% (2)	35% (6)	27% (8)
Multi-symptomatic	85% (11)	65% (11)	73% (22)
High Proteins CSF >54 = high proteins	38% (5)	65% (11)	53% (11)

Graph 1: Multiple sclerosis in two sexes in our study



Graph 2: Prevalence of weakness in our study

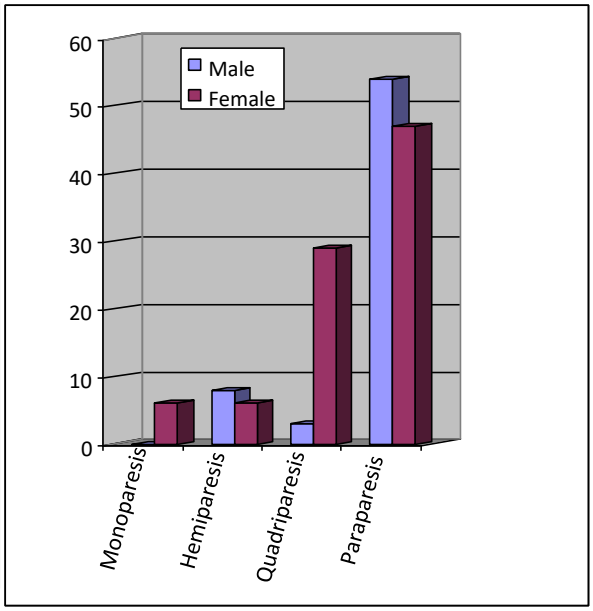


Table 2: Lesion predilection in our study

Site of Lesion	Male	Female	Total
Periventricular lesion	7(54%)	10(59%)	17(57%)
Spinal cord lesion	5(23%)	3(18%)	8(27%)
Optic nerve lesion	1(8%)	4(23%)	5(17%)
Cerebellar lesion	1(8%)	4(3%)	5(17%)
Brain stem lesion	1(8%)	1(1%)	2(7%)

DISCUSSION:

The purpose of this study is to evaluate different forms of multiple sclerosis presentation. A lot of research on multiple sclerosis, mainly in the West; Medline contains over 13,000 articles on multiple sclerosis since 1966, excluding chapters and other references to books[9-10]. This rare condition in tropical countries has not been extensively studied in Pakistan; There is little research on this subject in Pakistani magazines. A scarcity of resources may be another reason for poor research into the common neurological disease in the West in Pakistan[11-12]. Although we could not find a new or unusual presentation of MS due to the relatively small study population, we were able to compare our results with other national and international studies[13]. It is believed that while in the tropical area, the Pakistani population is not immune to this disease, but in fact has a very late or no differential diagnosis. Even Western researchers diagnose and implement treatment at GP level, because it appears to be more effective when treatment is started early, which can delay treatment. Multiple sclerosis is a disease with deep heterogeneity in the clinical course, neurological appearance of the lesion, involvement of susceptibility gene loci and response to treatment. The onset of the disease can be mono-symptomatic or multiple-symptomatic[14]. The age range we found in our population was generally between 15 and 55 years, women between 15 and 47 years and men

between 20 and 55 years old. In addition to women's dominance, we've found that women show signs of early multiple sclerosis. Our discovery, Asif, McDonnell-G-V et al. And Richard-A-R et al. Most of the cases found had many symptoms, i.e. about two-thirds of the cases. The history of relapses and remission was so frequent that only five patients had persistent symptoms or a history of the first episodes. A large number of patients with relapse and remission can be attributed to inadequate referral and diagnostic delays in non-specialized centers. In addition, a small number of patients who first applied could have minor or spontaneous symptoms that they have not received before, so they never received medical advice. Because multiple sclerosis is a chronic condition with increasing and decreasing symptoms, patients lose faith in doctors and are referred to spiritual healers. Raza-S-Q et al. Reported that patients who relapse and correct multiple sclerosis have high frequency. The visual change was weak and we found it in more than half of the patients. We found double vision (double vision), blurred vision, progressive loss of vision, and optic neuritis that occurs as nystagmus. Whereas Raza-S-Q et al. They reported vision problems in less than half of the amount recorded in the study. Ophthalmic changes were separated with increase in nystagmus, double vision and blurred vision, respectively. Shahid-J et al. Reported eye disorders and nystagmus[15].

Current research methods for diagnosing multiple sclerosis are MRI, visual evoked response and oligoclonal CSF bands. We are still limited to MRI due to lack of resources. Western authors rely on MRI sensitivity to the disclosure of MS plaques. Confidence in MRI: "Brain MRI has become the most sensitive test for detecting demyelination in multiple sclerosis." Most of our patients had plaques revealed by MRI; only a few patients had uncomplicated MRI examinations. In these patients, we depend only on the history and clinical features. This good decrease may be due to premature MRI or patient treatment. Capra et al. Report that the radiological resolution of acute MS platelets usually occurs for a period of at least 6-8 weeks. Werrings' findings show that there has been a slight progressive change in tissue integrity going beyond the resolution of traditional MRI before new focal lesions associated with open blood-brain barrier leaks. Periventricular plaques were exposed in about half of the population by MRI. Then followed by spinal cord injury, cerebellar injury, optic nerve involvement, and reduced brainstem hypertension. Tan-I-L states that "multiple sclerosis changes follow a pattern with most changes in the periventricular region and deep white matter." Raza-S-Q et al. Z Dale et al. They supported our findings with a similar pattern.

CONCLUSION:

It has been proven that relapses can be delayed by early treatment. In addition, if neurological symptoms cannot be explained by another neurological disease, multiple sclerosis must be consider consider in differential diagnosis.

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