ORIGINAL RESEARCH PAPER

Neurology

KEY WORDS:

CLINICAL AND ELECTROPHYSIOLOGICAL PROFILE OF HANSEN'S DISEASE –A CASE SERIES

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ABSTRACT

AIMS: To study the clinical and electrophysiological profile of Hansens disease .

Methods: 11 Consecutive confirmed cases of Hansens disease attending the neurology opd of Aarogyam Neuroclinic, Durgapur during January 2020 to April 2021 were included in the study

Inclusion criteria: Confirmed cases of Hansens disease with neurological involvement

Exclusion criteria- Patients with Diabetes, Alchohol intake, Systemic illness causing neuropathy were excluded

Results: Out of 11 patients included in study nine were male and were female.Most common age group was 30-45 years (45.4%),45-60 years(36.3%)and 20-30 years(18.18%).In the clinical and electrophysiological patterns of neuropathy.Mononeuropathy was the most common clinical pattern in 5 patients (45.4%).Ulnar nerve was the commonest nerve involved followed by common peroneal nerve and median nerve.Cranial Neuropathy in the form of facial paralysis was seen in one patient.2 patients had a mononeuritis multiplex like presentation. One patient had symmetric sensory motor neuropathy and one had bilateral ulnar neuropathy.Skin findings of hansens disease were seen in 9 patients .Two of patients had pure Neuritic Hansens disease proven by nerve biopsy and response to treatment.Nerve thickening was seen in all patients.Trophic skin changes were seen in 5 (45.4%)patients and 2 of them had non healing ulcer of the foot.

Conclusion: Hansens is still a common cause of neuropathy in this part of country and can present with varied manifestations.High Index of suspicion is needed for early diagnosis and to prevent permanent disabilities.

INTRODUCTION

Leprosy is a chronic granulomatous disease effecting humans since hundreds of years and may lead to irreversible damage to skin,nerves,limbs and ocular tissues (1)

Nervous tissue involvement can occur in leprosy in various stages of the disease and in different patterns of neuropathy.The diagnosis can be difficult especially in pure neural involvement and in non endemic regions.(2)

Countries like India,Brazil and other countries in south east asia are endemic to Hansens disease.World prevalence at the end of 2018 was 0.2/10,000.New case detection per 1000,000 in India in year 2018 is 8,89662.(3)Though cases of leprosy is reducing still it is an important public health issue.

This study is done to analyse the disease from neurologists perspective and to throw light on the neurological presentation of it in this part of the country in a pheripheral unit .

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Mononeuropathy was the most common clinical pattern in 5 patients (45.4%).Ulnar nerve was the commonest nerve involved followed by common peroneal nerve and median nerve.Cranial Neuropathy in the form of facial paralysis was seen in one patient.2 patients had a mononeuritis multiplex like presentation. One patient had symmetric sensory motor neuropathy and one had bilateral ulnar neuropathy.Skin findings of hansens disease were seen in 9 patients .Two of patients had pure Neuritic Hansens disease proven by nerve biopsy and response to treatment.Nerve thickening was seen in all patients.Trophic skin changes were seen in 5 (45.4%)patients and 2 of them had non healing ulcer of the foot.

Table 1.Represents the pattern of neuropathy based on clinical examination and Nerve conduction study data

Type of Neuropathy	Patient Count
Ulnar neuropathy unilateral	3
Ulnar neuropathy bilateral	1
Median neuropathy	1
Mononeurities multiplex	2
Facial nerve paralysis	1
Symmetric peripheral neuropathy	1
Unilateral common peronal neuropathy	2

DISCUSSION

Leprosy is a common treatable neuropathy. Still many patients end up with permanent neurological damage due to delay in diagnosis [4]. This is because the disease can present with varying manifestations depending on the immune status of individual.[4,5]. European study had shown that delay may be as long as 1.8 years.(6)

WHO define leprosy (7) as having the following manifestations:

1. Definite loss of sensation in a pale (hypopigmented) or reddish skin patch
2. A thickened or enlarged peripheral nerve with a loss of sensation and/or weakness in the muscles supplied by the nerve

3. The presence of AFB in slit skin smears

In our case series of 11 patients, nine had associated skin lesions and was evaluated by dermatologists with clinical examination and skin biopsy.The type of Hansens disease was not included in this particular study. Our study showed that it was common in males compared to females .Age group of 20-40 years was the commonly effected population. Both these findings corresponds with the world literature (8,9)

Two patients had pure neuritic Leprosy which was confirmed with high resolution Ultrasound of nerves showing nodular thickening of the involved nerves as well as nerve biopsy.All the patients were treated with antileprosy regimen according to the national guidelines. According to Indian data, PNL constituted about 4%–18% of leprosy patients and continues to occur in the post elimination era.[10] The incidence is reportedly higher in South India comprising up to 18% of new cases. The most common presentation of PNL is a mononeuritis (single nerve involvement) or as asymmetrical mononeuritis multiplex which occurs in about 60% of the cases.[11,12]

Mononeuropathy was the commonest pattern and ulnar followed by common peroneal nerves were the usual involved structures.This correlated with other studies in the literature.(10,11,12)

Two of our patents had chronic non healing ulcer which was undiagnosed initially for almost 1 year until hansens disease was suspected and diagnosed.

One patient had a symmetric length dependent ,sensorimotor neuropathy.This is again described as a rare manifestation in literature.(13)

2 patients had mononeuritis multiplex and one of them mimicked a Gillian barry syndrome(GBS) until the skin lesions associated where discovered and he was found to have lepromatous reaction .Such fulminant presentation has been described in Indian literature.Few cases of GBS like presentation has been described without any Leprae reaction.(14,15,16)

One of our patient had facial paralysis which was LMN type and involved the zygomatic branches selectively.Other cranial neuropathies were not found.

CONCLUSION

Hansens is still a common cause of neuropathy in this part of country and can present with varied manifestations.High Index of suspicion is needed for early diagnosis and to prevent permanent disabilities.

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