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Neurological manifestations in HCV seropositive patients

Dr Athina Srinivasulu MD DM Neuro,
Assistant Professor, Department of Neurology, Siddhartha Medical College, Government General Hospital, Vijayawada

Abstract: *Chronic hepatitis C infection is a major health issue in India. We studied the neurological manifestations in 50 HCV positive patients presenting to the department of neurology at GGH-SMC, Vijayawada. In the 50 chronic hepatitis C patients, 50% had at least one neurological manifestation. Peripheral neuropathy was the most common neurological manifestation (46%). Screening for neurological illness in HCV positive patients is needed.*

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I. Introduction

About 90% of Hepatitis C patients live in low and middle income countries [1-3]. In these patients, 74% patients have several extrahepatic manifestations (EHMs). Neurological manifestations are reported as high as 50% of HCV infected patients [4–6]. Only a few studies have been carried out in developed countries on HCV related neurological manifestations. Despite the high burden of Hepatitis C in India, there is a paucity of data on the neurological aspects. We studied the neurological manifestations in chronic hepatitis C infected patients from our hospital.

II. Materials and methods

This cross-sectional study was carried out in the outpatient neurology unit of the Govt General Hospital, Vijayawada from January to March 2018. After anti-HCV positive testing, neurological assessment was done. Patients were included after informed consent.

III. Results

The age of participants ranged from 30 to 70 years with a mean age of 60±9.0 years. Sex ratio 1:1 . 50% had neurological problems.

Table 1 Clinical patterns of neurological manifestations.

Variable	Percentage (%)
Neurological manifestations	
Cognitive impairment	7
Stroke	2
Seizure	1
Peripheral neuropathy	50
Cranial neuropathy	3
Carpal tunnel syndrome	1

Neurologic symptoms

The most common symptom reported during the study period were cramps; 40%, followed by paraesthesia in 30% and fatigue in 30%.

Neurological signs

The commonest neurological sign present on examination was abnormal vibration perception in 50%. Facial palsy was noted in 3%.

Table 2 Cognitive assessment findings.

Variable	Percentage (%)
No cognitive impairment	90
Mild cognitive impairment	10
MMSE score (mean ± SD)	

Table 3 Peripheral neuropathy assessment findings.

Variable	Percentage (%)
Peripheral neuropathy subclass	
Sensory	50

Sensori-motor	1
Motor	1
Upper limb	2
Lower limb	50

IV. Discussion

In this study, we found that half of the HCV patients had neurological problems. We noted that the most common neurological manifestation was peripheral neuropathy. The high proportion of peripheral neuropathy has been shown consistently in previous studies [4–6].

Our peripheral neuropathy prevalence is similar to the 45% clinical neuropathy reported by Manal et al. in Egypt [7], and 43.5% by Yoon et al. in Germany [8]. Other studies recorded prevalence estimates of 9%, 10.6% and 14% in France, Italy, and Brazil respectively [9-11]. This wide variability could be attributed to the difference in sample sizes and study designs. Other reports show predominance of sensory neuropathy [7, 10, 12, 13]. In our study, the prevalence of cognitive impairment was 10%. Other studies report from 13% to 33% [14 -18]. Most of the studies used neuropsychological batteries with several tests for different cognitive domains. The commonest neurological signs observed in our study were abnormal vibration sense, concurring with Yoon et al.'s findings in Germany [10]. The most common symptoms reported in our study were limb cramps, paraesthesia and fatigue. The proportion of patients with paraesthesia is congruent with the 38% and 34.6% reported in studies in Germany and Brazil [10,13].

Limitations of our study include, the hospital design and small sample size.

V. Conclusion

HCV seropositive patients have significant neurological problems. These need to screened and addressed.

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