

Abstract

Multiple Sclerosis (MS) is believed to be a disease that affects people in their 30s-40s. However, pediatric cases have been reported and account for approximately 5% of all MS cases (Yeh et al 2009). Early diagnosis of MS is fundamental for effective treatment and positive disease prognosis. Establishing that this disease is manifested at an early age is critical since there is currently no disease modifying therapy (DMT) approved for pediatric cases. Recent pediatric clinical trials show that there is a growing awareness of pediatric data. Consciousness can diminish misdiagnosis of MS in pediatric patients. Conditions such as acute disseminated encephalomyelitis (ADEM) and subacute combined degeneration can be commonly confused with this disease due to similar signs and symptoms. This study aims to estimate the prevalence of Hispanic patients whose symptom onset began at or before the age of 18. Data provided by Puerto Rico (PR) MS Registry was collected from self-reported questionnaires. Descriptive statistics were performed to analyze data set. PRMS Registry has 2904 enrolled patients out of which 1638 had the data required for use in this study. 173 (10.6%) of patients analyzed experienced their first symptom on or before the age of 18. Out of those 25 (14.5%) were under the age of 13 and 148 (85.5%) were between the ages of 13-18. 132 (76.3%) of the patients were female and 40 (30.3%) were male, sustaining that 3:1 ratio seen in MS. This study shows that 10.6% of patients diagnosed with MS in PR experienced their first symptom on or before the age of 18, demonstrating that disease onset can start much earlier than previously expected. Understanding this fact will diminish misdiagnosis and allow for better treatment of these patients.

Objective

Estimate the prevalence of Hispanic patients whose symptom onset began at or before the age of 18.

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Methods

Data was provided by Puerto Rico (PR) MS Registry collected from self-reported questionnaires. Descriptive statistics were performed to analyze data set. At the time of this study the PRMS Registry had 2904 enrolled patients out of which 1638 had the data required for use in this study.

Results

Patients with Pediatric Onset	Number of Cases	Percent
Females	132	76.3
Males	40	30.3
Total	173	10.6

Table 1: Number and percentage of pediatric onset MS cases in Puerto Rican patients. Percentages calculated from total patients analyzed (n=1638).

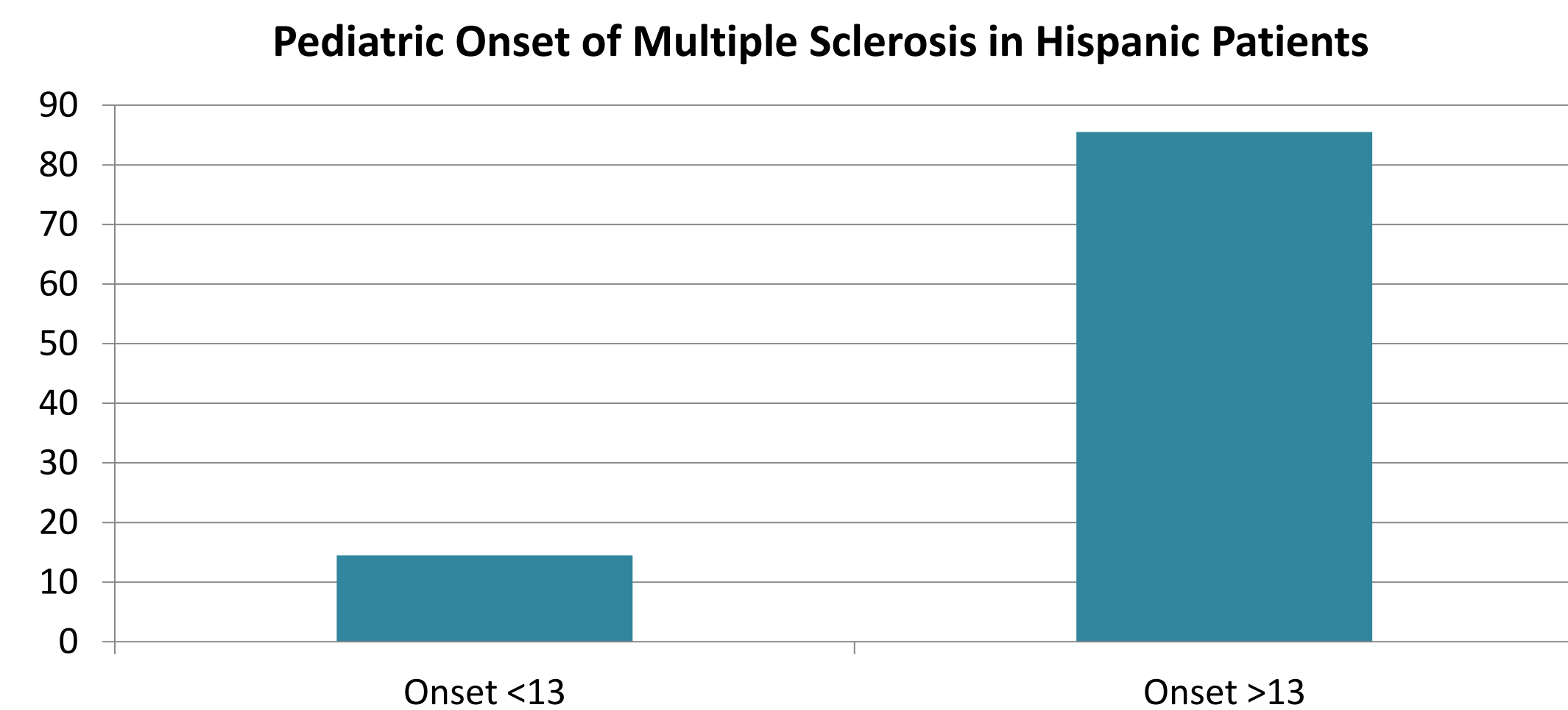


Figure 1: Division by age, in percentage, of the pediatric onset of MS. It is evident that most cases occur in adolescence.

Discussion

Out of the 1638 patients analyzed, 173 (10.6%) of those patients experienced their first symptom on or before the age of 18. From these results, it was calculated that 25 (14.5%) were under the age of 13 and 148 (85.5%) were between the ages of 13-18. This indicates that most pediatric MS onset cases occur during adolescence. Out of the 173 patients analyzed, 132 (76.3%) were female and 40 (30.3%) were male. This sustains the characteristic 3:1 sex ratio seen in MS.

Conclusion

MS typically affects people between the ages of 30 and 40. However, this study shows that 10.6% of patients diagnosed with MS in PR experienced their first symptom on or before the age of 18. This demonstrates that disease onset can commence much earlier than previously expected. Understanding this fact is critical since it will diminish misdiagnosis of pediatric MS for other conditions, such as ADEM, and will emphasize the need for approved pediatric MS DMTs. This will thus allow for better treatment of these patients. It is therefore pertinent to perform further pediatric DMT studies so as to provide these patients with a better life expectancy.

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