INTRODUCTION

In CLARITY, treatment with Cladribine Tablets showed strong efficacy in patients with relapsing multiple sclerosis (RMS) versus placebo over 2 years.1

In CLARITY Extension, Cladribine Tablets produced durable clinical benefit.2

There was no difference in clinical efficacy between treatment with Cladribine Tablets in CLARITY followed by placebo in CLARITY Extension, vs. treatment with Cladribine Tablets in both CLARITY and CLARITY Extension.

Patients with RMS and high disease activity (HDA) may be at higher risk of relapses and disability progression.

In a post hoc analysis of CLARITY, patients with HDA had clinical and magnetic resonance imaging responses to Cladribine Tablets 10 mg (3.5 mg/kg cumulative dose over 3 years, equivalent to Cladribine Tablets 3.5 mg/kg) that were generally better than, or comparable with, the overall CLARITY population.3

Lymphopenia is an anticipated side effect of cladribine treatment due to its pharmacological properties leading to selective depletion of lymphocytes, as observed in CLARITY and CLARITY Extension.4

While there does not appear to be a direct link between lymphocyte count reduction and clinical or MRI outcomes, it is relevant to investigate whether HDA patients are more likely to experience lower lymphocyte counts.

OBJECTIVE

To determine the rate of lymphopenia in patients with HDA in the CLARITY/CLARITY Extension studies in patients receiving Cladribine Tablets 3.5 mg/kg in CLARITY and other Cladribine Tablets 3.5 mg/kg or placebo in CLARITY Extension.

METHODS

In this post hoc analysis, patients exposed to Cladribine Tablets 3.5 mg/kg in CLARITY or CLARITY Extension in Years 1 and 2 only are referred to as the CT 3.5 group (n = 685) and a subgroup of these patients who received further courses of Cladribine Tablets 3.5 mg/kg in Years 3 and 4 are referred to as the CT 7.0 group (n = 186) (see Figure 1 for study design).

RESULTS

Lymphopenia based on adverse event reporting

In the CT 3.5 group, the incidence rates of AESI lymphopenia were similar for the two HDA subgroups and the corresponding HDA and non-HDA subgroups (Table 1).5

In CT 3.5 at Year 2, AEs (1010 patient-years were similar in the HRA (n = 196) and HRA-DAT (n = 213) subgroups (15.08 and 13.09 respectively) and similar between corresponding non-HDA groups (14.08 (n = 486) and 13.68 (n = 486) respectively).6

CT 7.0 and Year 4 rates were approximately double the CT 3.5 at Year 2, but not different between HDA and non-HDA subgroups.

There was a low rate of serious AESI lymphopenia in the CT 3.5 HRA and non-HRA groups and no incidences in the HRA Table 1.7

CONCLUSIONS

There were no relevant differences between the HDA and non-HDA subgroups with regard to incidence of the AESI lymphopenia, ALC nadir, and time to ALC nadir.

There were no relevant differences between the HRA and HRA+DAT subgroups with regard to incidence of the AESI lymphopenia and ALC nadir, suggesting that the inclusion of previously-treated patients did not change the risk and the severity of lymphopenia.

It should be noted, however, that DAT patients represented only a small proportion of additional HDA patients.

Patients who received CT 3.5 mg/kg had a lower incidence of AESI lymphopenia than patients who received CT 7.8

REFERENCES


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