Outcomes of COVID-19 in Patients With Relapsing Multiple Sclerosis Receiving Ofatumumab: Data From the ALITHIOS Study and Post-marketing Surveillance

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Introduction

• As of 31-January-2021, the WHO reported that >102 million people worldwide had been affected by COVID-19, with fatal outcome in >2.2 million people1
• Baseline factors such as age and co-morbidities, and in people with multiple sclerosis (MS), MS phenotype, higher disability rate and treatment with disease-modifying therapies (DMTs) may affect COVID-19 severity and outcomes3,4
• In people with MS (treated or untreated with DMTs) variable rates of hospitalizations (9.7% to 36.5%) and deaths (1.6% to 10.3%) due to COVID-19 have been reported in the existing literature3,4
• Evidence from clinical studies and real world is required to better understand the impact of COVID-19 on patients with MS treated with DMTs

Objective

• To report the characteristics and outcomes of COVID-19 in patients with relapsing MS (RMS) receiving ofatumumab from the ongoing, open-label, long-term extension ALITHIOS trial and post-marketing reports

Methods

ALITHIOS open-label extension trial

• Cases of COVID-19 infection in patients receiving ofatumumab (data cut-off: 29 January 2021) were reviewed
• Cases were defined as confirmed (laboratory confirmation) or suspected COVID-19 (signs and symptoms but no laboratory confirmation)
• Seriousness category (including hospitalisation), severity and outcomes were presented as reported by the site investigators

Post-marketing reports

• Cases of COVID-19 infection in patients receiving ofatumumab (data cut-off: 31 January 2021) were reviewed
• COVID-19 cases were assessed as confirmed (laboratory confirmation or diagnosis) or suspected (lack of laboratory confirmation or diagnosis)
• Seriousness category (including hospitalisation), severity, and outcomes were presented as reported by the healthcare providers (HCPS) or non-HCPS

Results

ALITHIOS open-label extension trial

Baseline characteristics

• As of data cut-off, 139 of 703 patients (8.2%) in ALITHIOS reported COVID-19 (confirmed: 115 [82.7%]; suspected: 24 [17.3%])
• Mean ± SD age at baseline: 37.7 ± 8.7 years and majority were female: 64%; mean ± SD BMI: 25.7 ± 5.868 kg/m²

Overall summary

• 10 patients (7.2%) experienced serious COVID-19; 94% cases were in AModerate (Table 1)
• Treatment interruption was reported in 22 patients (15.8%), and none discontinued treatment except for 1 patient with a fatal outcome

• All 139 COVID-19 cases (100%) had IgG levels above lower limit of normal (5.65 GL) either before or during the period effected by COVID-19
• Immune response to SARS-CoV-2 was assessed independently of this study (funded by Novartis) in 3 cases with mild confirmed COVID-19. While no antibody response was observed, T-cell immunity to SARS-CoV-2 was observed in all 3 patients (using an interferon-γ ELISPOT assay)

Table 1. Summary of COVID-19 Cases From ALITHIOS (N = 1703)

<table>
<thead>
<tr>
<th>COVID-19 onset time</th>
<th>Confirmed</th>
<th>Suspected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within 7 days</td>
<td>13 (9.9)</td>
<td>13 (9.9)</td>
</tr>
<tr>
<td>8–28 days</td>
<td>43 (33.2)</td>
<td>43 (33.2)</td>
</tr>
<tr>
<td>&gt;28 days</td>
<td>83 (61.9)</td>
<td>83 (61.9)</td>
</tr>
</tbody>
</table>

• Unrecovered or condition unchanged and no fatal or life-threatening outcomes were reported as of data cut-off (n = 3)
• A small number of hospitalisations (~7%) were noted, and deaths (1.6%) were reported as of data cut-off (n = 26)

• As of data cut-off, 28 patients (confirmed: 26; suspected: 2) were reported to have COVID-19
• Among 26 confirmed cases
  – Mean age at baseline: 44 (20-65) years
  – Majority were female: 18 patients

Table 2. Summary of COVID-19 Cases From Post-marketing Reports

<table>
<thead>
<tr>
<th>COVID-19 Onset</th>
<th>Confirmed COVID-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within 7 days</td>
<td>2 (9.1)</td>
</tr>
<tr>
<td>8–28 days</td>
<td>22 (49.5)</td>
</tr>
<tr>
<td>&gt;28 days</td>
<td>23 (51.5)</td>
</tr>
</tbody>
</table>

Conclusions

• Of the 139 patients (8.2%) from the ALITHIOS open-label extension trial who reported COVID-19, – Most COVID-19 cases (94%) were mild or moderate – A small number of hospitalisations (~7%) were noted, with one (<1%) fatal outcome – Most cases (>96%) recovered within 20 days

• Similar observations were seen in the post-marketing reports of confirmed cases where all were assessed as recovered or condition unchanged and no fatal or life-threatening cases
• There was no evidence of increase in COVID-19 incidence or severe outcomes in ofatumumab-treated RMS patients when compared to the general population1,3 and MS patients treated with or without DMTs2,4
• The majority of COVID-19 infections in ofatumumab-treated patients are self-limited

References


Post-marketing reports

Baseline characteristics

• As of data cut-off, 28 patients (confirmed: 26; suspected: 2) were reported to have COVID-19
• Among 26 confirmed cases
  – Mean age at baseline: 44 (20-65) years
  – Majority were female: 18 patients

Seriousness or severity category

• Most cases were non-serious, and none were fatal or life-threatening
• Majority of the cases were mild/moderate (Table 2)

Outcomes

• Of data available for patients (N = 16), all patients (100%) had either recovered (n = 13) or the condition was unchanged at the time of reporting (n = 3)

Figure 2. Confirmed COVID-19 outcomes from post-marketing reports

Conclusions

• Of the 139 patients (8.2%) from the ALITHIOS open-label extension trial who reported COVID-19, – Most COVID-19 cases (>94%) were mild or moderate – A small number of hospitalisations (~7%) were noted, with one (<1%) fatal outcome – Most cases (>96%) recovered within 20 days

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