

### Alemtuzumab/cladribine/natalizumab

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#### Lymphopenia and COVID-19 infection: case report

A 24-year-old woman developed lymphopenia during treatment with alemtuzumab, and COVID-19 infection secondary to alemtuzumab, cladribine and natalizumab for multiple sclerosis [*dosages not stated; not all routes and duration of treatments to reactions onsets and outcomes stated*].

The woman, who had relapsing-remitting multiple sclerosis with high disease activity for about 6 years, received therapy with cladribine, natalizumab, dimethyl-fumarate and interferon. She had a significant history of heart valve repair. She had been receiving unspecified ACE-inhibitors and beta-blockers. In July 2020, due to severe clinical relapse and worsening of EDSS score, her treatment was switched to alemtuzumab. On August 2020, she received first cycle of alemtuzumab infusion. However, after 4 months, in November 2020, due to exposure to positive COVID-19 family member, a nasopharyngeal swab was performed which showed a positive result for COVID-19 infection. Her regular blood tests showed mild leukopenia and grade 3 lymphopenia ( $0.4 \times 10^3/\mu\text{L}$ ). She was completely asymptomatic. Hence, she was home quarantined. She had mild asthenia and low-grade fever.

The woman started receiving treatment with paracetamol, with improvement in fever. In December 2020, two repetitive nasopharyngeal swabs showed a negative result for COVID-19 infection. In January 2021, her anti-SARS-CoV-2 IgG antibodies test showed a positive result.