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Incidence of COVID-19 after vaccination in people with multiple sclerosis in Argentina: data from the nationwide registry RelevareEM

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Objective: The objective of the study was to evaluate the incidence of COVID-19 after complete vaccination in people with multiple sclerosis (PwMS) included in the Argentinean MS and NMOSD registry (RelevareEM, NCT 03375177).

Methods: cohort study conducted between May 2021 and December 2021. The primary outcome was the appearance of infection during the follow-up time (at least three months after complete vaccination (second dose)). Data was collected through the contact between the treating physician and the patient. Specific information was requested (date, symptoms, need for hospitalization, ventilatory assistance, treatment, and evolution). The contact was made every 30 days during the period of 3 months after the full dose vaccination. A positive COVID-19 case was defined according to the definition established by the Ministry of Health in Argentina. Cumulative incidence was reported by Kaplan Meier survival curves as well as incidence density.

Results: A total of 576 PwMS were included, mean age 45.2 ± 13 years, 432 (75%) RRMS, 403 (70%) were female. The mean and median time of follow-up after the second dose was 91 ± 17 and 94 ± 21 days respectively. Most frequent first and second dose received was Astra-Zeneca vaccine, followed by Sputnik V vaccine. During follow-up a total of 20 COVID-19 cases were observed for a total exposure time of 39557 days. The overall cumulative incidence for the observed period was 3.4% (SE 0.4%) with an overall incidence density of 5×10.000 patients/day (95%CI 0.7-12). We observed more cases in woman than men with an incidence density of 6×10.000 patients/day (95%CI 0.9-9) vs. 3×10.000 patients/day (95%CI 0.2-6) respectively, but not significantly different (IRR 1.7 95% CI 0.56-7.37 $p = 0.15$).

Conclusion: we found an incidence density of breakthrough COVID-19 infection of 5×10.000 patients/day (95%CI 0.7-12) after vaccination in Argentina.

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