

EULAR
03.06.2021
Kilchberg,
Switzerland

THE TRUE SPREAD OF SARS-COV-2 INFECTION IS MUCH GREATER THAN THAT OBSERVED BY CAPTURING ONLY SWAB-DIAGNOSED COVID-19 CASES

COVID-19: The MAINSTREAM project in Lombardy, Italy

The true prevalence of COVID-19 is still unknown due to the high proportion of subclinical infection. Measuring seroprevalence may be crucial to improve knowledge about the impact of COVID-19 in rheumatic patients. Data shared at the 2021 EULAR congress highlight that the spread of SARS-CoV-2 infection is much greater than that observed by capturing only swab-diagnosed COVID-19 cases, but consistent with healthy population.

As part of the MAINSTREAM project, Favalli and colleagues conducted a seroprevalence cross-sectional study between 4th May and 16th June 2020 to estimate the prevalence of anti-SARS-CoV-2 antibodies in a large cohort of people with rheumatoid arthritis (RA) or spondyloarthritis (SpA) treated with biologic or targeted synthetic disease modifying antirheumatic drugs (b/tsDMARDs) in a COVID-19 high-endemic area (Lombardy, Italy). Over this time, 300 people were tested for IgG, IgM and IgA antibodies against three viral antigens – nucleoprotein, spike protein, and the receptor-binding domain. These data were compared with those observed in the healthy population in the same period and region. Everyone taking part also completed a questionnaire to collect information about symptoms consistent with COVID-19, risk factors, and comorbidities.

Overall, 65% of people taking part had RA, 23% had psoriatic arthritis, and 21% had ankylosing spondylitis. Most people were being treated with tumour necrosis factor inhibitors (TNFi; 57%), and the remainder were receiving abatacept (20%), interleukin-6 inhibitors (IL-6i; 11%), or janus kinase inhibitors (JAKi; 5%). Of the 300 people, 4 had a prior diagnosis of COVID-19 defined by nasopharyngeal swab.

Immunoglobulin titres were evaluated resulting in 9%, 13.6%, and 13.3% positive patients for IgG, IgM and IgA, respectively, and there was no significant difference to the healthy population. Among seropositive patients, 55.3% were asymptomatic, 16% had minor and 19.6% major symptoms, 7.1% were hospitalized. No deaths or admission to intensive care occurred. IgM, IgG and IgA titres to the receptor binding domain of the virus were higher in patients with both minor and major symptoms compared with asymptomatic ones. No differences were found between seronegative and seropositive patients in relation to age, sex, rheumatic diagnosis, and treatment with cs- and b/tsDMARDs or corticosteroids. A relative increased risk was associated with obesity and presence of at least two comorbidities.

This study confirms that, even in a cohort of rheumatic patients, the spread of SARS-CoV-2 infection is much greater than that observed by capturing only swab-diagnosed COVID-19 cases. The underlying rheumatic disease and ongoing therapy with b/tsDMARD does not seem to impact SARS-CoV-2 antibody positivity, which conversely seems to be associated to symptomatic COVID-19 and presence of comorbidities.

Source

Favalli EG, et al. Seroprevalence of anti-SARS-CoV-2 antibodies in rheumatic patients treated with biological and targeted therapy living in Lombardy, Italy (MAINSTREAM project). Presented at EULAR 2021; poster POS0048

About EULAR

EULAR is the European umbrella organisation representing scientific societies, health professional associations and organisations for people with rheumatic and musculoskeletal diseases (RMDs). EULAR aims to reduce the burden of RMDs on individuals and society and to improve the treatment, prevention and rehabilitation of RMDs. To this end, EULAR fosters excellence in education and research in the field of rheumatology. It promotes the translation of research advances into daily care and fights for the recognition of the needs of people with RMDs by the EU institutions through advocacy action.

About the EULAR European Congress of Rheumatology

Since its introduction in 2000, the annual EULAR European Congress of Rheumatology has become the primary platform for exchange of scientific and clinical information in Europe. It is also a renowned forum for interaction between medical doctors, scientists, people with arthritis/rheumatism, health professionals and representatives of the pharmaceutical industry worldwide. The EULAR congress is usually held in June in one of the major cities in Europe ([see previous congresses](#)).

The [scientific programme](#) at the congress covers a wide range of topics on clinical innovations, clinical, translational and basic science. Meetings set up by associations of people with arthritis/rheumatism, health professionals and the health care industry complement the programme. The poster sessions, offering lively interaction between presenters and participants, are regarded by many as the heart of the congress.

Over the years, the EULAR Congress has gained a reputation of being a most innovative platform for the practicing physician particularly with respect to the acquisition of information on novel clinical research. The congress attracts more than 18,000 delegates from more than 130 countries.

The aim of the EULAR European Congress of Rheumatology is to provide a forum of the highest standard for scientific, both clinical and basic, educational, and social exchange between professionals involved in rheumatology, liaising with patient organisations, in order to achieve progress in the clinical care of people with rheumatic diseases.

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