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IMMUNOGENICITY OF COVID VACCINES IN PEOPLE WITH RHEUMATIC DISEASE

New insights shared at the EULAR Congress

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COVID-19 is the disease caused by SARS-CoV-2 infection. Initial studies on the immunogenicity of COVID-19 vaccines in patients with immune-mediated inflammatory rheumatic diseases (IRD) reported diminished antibody responses, particularly for people treated with rituximab or abatacept. New data released at the 2022 EULAR Congress confirm that people on rituximab and abatacept should be prioritized for booster doses of COVID-19 vaccine.

Patients with rheumatoid arthritis (RA) may have impaired immunogenicity to COVID-19 vaccines. DANBIO data presented by Dr René Cordtz reveal that – regardless of vaccination status – patients with RA had increased incidence of COVID-19 hospitalization compared to matched individuals. However, the absolute risk was 0.20% for unvaccinated patients at 60 days and 0.08% for comparators, whereas it remained below 0.05% at 180 days of follow-up in both groups when fully vaccinated. The low absolute risk was due to the combined effect of vaccination, seasonality, and societal restrictions.

The group also showed that increased SARS-CoV-2 infection rates were seen only among unvaccinated patients with RA. Analysis demonstrated increased incidence of COVID-19 hospitalization among rituximab-treated patients compared to those receiving csDMARDs, but it was not possible to disentangle if this was due to rituximab or the fact that these patients were also more likely to receives glucocorticoids and have a history of cancer-treated patients. Importantly, the parallel decreasing risk for patients with RA suggests a comparable relative benefit of vaccination. Less favourable outcomes among rituximab-treated patients suggest extra care should be taken around use and users of this drug.

Similar conclusions were drawn by a Swedish national group led by Professor Meliha C Kapetanovic and presented by Dr Martina Frodlund, who shared data on the antibody response after two doses of COVID-19 vaccine in 414 patients with various IRD treated with biologic or targeted synthetic DMARDs, either as monotherapy or in combination with csDMARDs.

Their results showed that those receiving IL-6 inhibitors, abatacept, or rituximab had a significantly lower antibody response rate compared to controls. This difference was more pronounced when therapies were combined with a csDMARD. When analysed further, higher age, rituximab, abatacept, concomitant csDMARD but not IL-6 inhibitors, concomitant prednisolone, or a vasculitis diagnosis, remained significant predictors of antibody response.

In general, all vaccines were well tolerated, and only 3.4% of the patients reported an increase in their disease activity following vaccination.

In another session, Dr Ingrid Jyssum presented findings from the Nor-vaC study, assessing serological response and safety of a three-dose vaccination strategy in patients with immune mediated inflammatory diseases (IMID) on immunosuppressive therapy as compared to the standard two-dose vaccination offered to healthy controls.

After two doses, median anti-Spike antibody levels were significantly lower in patients than controls, but there were comparable levels following the third dose. One of the main factors associated with high antibody levels after the third dose was vaccine type. These findings were consistent across all diagnoses and treatment groups, supporting the implementation of a three-dose vaccine regimen as standard in the IMID population.

Source

Cordtz R, et al. Incidence of COVID-19 infection and hospitalisation according to vaccination status and DMARD treatment in patients with rheumatoid arthritis. Presented at EULAR 2022; abstract OP0173.

Frodlund M, et al. The impact of immunomodulating treatment on the immunogenicity of COVID-19 vaccines in patients with immune-mediated inflammatory rheumatic diseases compared to healthy controls. Presented at EULAR 2022; abstract OP0172.

Jyssum I, et al. Serological response and safety of a three-dose SARS-CoV-2 vaccination strategy in patients with immune-mediated inflammatory diseases on immunosuppressive therapy. Presented at EULAR 2022; abstract OP0192.

About EULAR

EULAR – the European Alliance of Associations for Rheumatology – 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.

The scientific programme 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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