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EUROPEAN CONGRESS OF RHEUMATOLOGY EULAR 2020, 3 TO 6 JUNE 2020 (ORIGINALLY PLANNED TO BE HELD IN FRANKFURT/MAIN, GERMANY, NOW REORGANISED TO E-CONGRESS)

Study on COVID-19 in the Context of Rheumatic and Musculoskeletal Diseases Provides Reassurance to Patients on Immunosuppressive Medications

Kilchberg/Switzerland: Different groups of drugs are used for the treatment of rheumatic conditions. They are intended to suppress the rogue immune system which attacks its own body. It is unclear to date whether the use of immunosuppressants increases the risk of a severe course in case of an infection with the novel coronavirus SARS-CoV-2. A current study published in the run-up to the European Congress of Rheumatology of the EULAR (European League Against Rheumatism) analysed, for the first time, 600 COVID-19 cases in rheumatic disease patients from 40 countries and investigated the impact of the choice of rheumatic disease therapy on potential hospitalisation and the course of COVID-19. The results of the study will be presented in an online press conference in the context of the EULAR Congress on 3 June 2020.

Data on the course of COVID-19 in patients with rheumatic conditions are still rare and limited to small numbers of cases. Patients with rheumatic diseases are concerned about the extent to which their condition increases the risk of a severe course and the impact of the intake of their immunosuppressants on this. "There is considerable uncertainty about the drug management in the context of rheumatic conditions," EULAR President Professor Dr Iain B. McInnes from Glasgow, Scotland, United Kingdom explains.

Scientists have now addressed the question to what extent the different groups of drugs¹ increase the probability of hospitalisation in rheumatic disease patients with COVID-19. For this purpose, they analysed a series of cases involving persons with rheumatic conditions and COVID-19 from the combined EULAR and Global Rheumatology Alliance COVID-19 registries, dating from between 24 March 2020 and 20 April 2020. The study included a total of 600 cases from 40 countries.

The researchers analysed the patients' age, sex, whether they smoked or not, the rheumatic disease diagnosis, comorbidities and medication against rheumatic conditions taken immediately prior to the infection. The result: The intake of conventional disease-modifying antirheumatic drugs (csDMARDs) – such as anti-malarial drugs or methotrexate – alone or in combination with biologics (e.g. TNF-alpha inhibitors), or the intake of nonsteroidal anti-inflammatory drugs (NSAIDs) was not associated with hospitalisation. The intake of TNF-alpha inhibitors was associated with a reduced probability of hospitalisation, while no association with the intake of anti-malarial drugs was observed.

Treatment with more than 10 mg prednisone per day – corresponding to a moderate to high dose – was associated with a higher probability of hospitalisation. Prednisone is a glucocorticoid frequently used in rheumatology as a fast-acting anti-inflammatory drug.

Less than half of the patients required hospitalisation (277; 46 percent), while 55 fatalities (9 percent) occurred. This should not be interpreted as the true rate of hospitalisation and death among patients with rheumatic disease infected with SARS-CoV-2. Due to the mechanism by which case information is collected severe cases are more likely to be reported to the database (i.e. mild or asymptomatic cases are less likely to be reported) therefore artificially increasing the rate of hospitalisation/death in the group of reported patients.

"The study shows that most patients with rheumatological conditions recover from COVID-19 – independent of the medication they receive," says Professor Dr John Isaacs from The University of Newcastle, United Kingdom, Scientific Chair of the EULAR Scientific Committee. "It is necessary, however, to gather more knowledge about the course of an infection with the novel coronavirus in patients with inflammatory rheumatic conditions."

Within the space of only a few weeks, rheumatologists from all over the world teamed up in order to establish an international COVID-19 registry (www.rheum-covid.org), an effort supported by EULAR that created a mirroring COVID-19 registry (www.eular.org/eular_covid19_database.cfm). "There is an urgent need to understand the outcome of patients who have been infected with SARS-CoV-2 while at the same time receiving steroids, synthetic or biological disease-modifying anti-rheumatic drugs and nonsteroidal anti-inflammatory drugs," Dr Pedro Machado, Chair of the EULAR Standing Committee on Epidemiology and Health Services Research and co-senior author of the study, points out. "This will support rheumatologists and other health care professionals, such as specialist nurses, in advising their patients and improving their care."

References:

Gianfrancesco M, Hyrich KI, Al-Adely s, et al. Ann Rheum Dis 2020 [epub ahead of print]. doi:10.1136/annrheumdis-2020-217871.

¹ Groups of drugs used in rheumatic disease therapy

In case of autoimmune diseases like rheumatoid arthritis or systemic lupus erythematosus, the immune system turns against its own body and triggers inflammations in a number of places. Treatments to suppress inflammation (immunosuppressants) and the long-term progression of the disease are required. In clinical parlance, Disease-modifying anti-rheumatic drugs (DMARDs) act by altering the underlying disease rather than treating symptoms. They're not painkillers, but they'll reduce pain, swelling and stiffness over a period of weeks or months by slowing down the disease and its effects on the joints. There are two types: conventional DMARDs and biological therapies. Biological therapies (also known as biologics) are newer drugs that have been developed in recent years. They target individual molecules, such as the tumour necrosis factor alpha (TNF-alpha), and tend to work more quickly than conventional DMARDs. In addition to these therapies, drugs containing cortisone such as glucocorticoids, which can effectively and quickly suppress the inflammatory response, are used for the treatment of rheumatic conditions. Another group of drugs used to treat rheumatic conditions are nonsteroidal anti-inflammatory drugs (NSAIDs), which alleviate pain and stiffness in the joints and improve mobility.

Further information:

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